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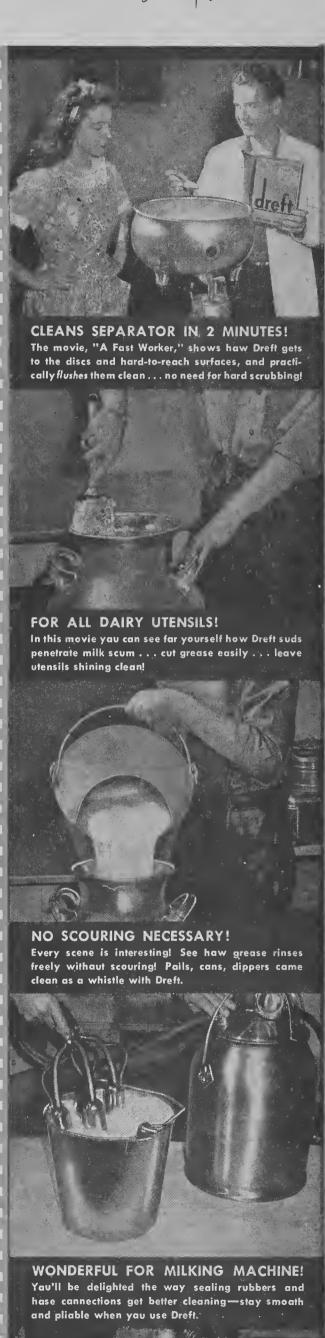
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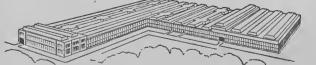
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O you're thinking of leaving the prairies for the lush fruit-growing Okanagan Valley of British Columbia? Thousands of other "fugitives" have done so lately, and it's a grand place to live in — but hadn't you better make sure what you're letting yourself in for before doing any bridge-burning?

Those lovely orchard lands, for instance, will probably cost you a cool thousand dollars an acre; and it takes ten acres to make an average-sized farm. You may have heard that an apple farmer harvests a thousand boxes per acre, and done some delighted calculation on the basis of the four bucks a box you paid for those fancy Delicious apples-but don't count on clearing four thousand dollars per acre per year. Rarely does land produce so heavily, and if you know any other kind of farming you must know that the producer is lucky if he gets half what the consumer has to pay. More of this later.

For another thing, it's a very different kind of farming in the Okanagan from what you're used to. Not much riding a tractor or implements here; instead, you have to climb around trees on 12 to 16foot ladders, up and down, all day, for months at a time. Pruning in winter, thinning in late spring and summer, picking in the fall, it's all ladder work; the last with a picking bag that holds

up to fifty pounds of apples slung in front of your belt like an auxiliary stomach, and it gets mighty heavy by the time you've filled and emptied it a hundred times a day.

Your hands have to be mighty busy too, as well as your feet. And the tops of those ladders are only about 5x10 inches in size and sometimes you have to stand right on top there with no visible means of support to reach a high limb—and brother, that ground can look awful hard and far away. . . .

It's all irrigated land, too; often there is no rain to speak of from May to September, and with irrigation supplied you at regular intervals from reservoirs of spring run-off water stored in the hills, you don't need to worry about it. It's a grand feeling, after prairie farming through the dry years, to be able to go out morning after rainless morning and gaily thumb your nose at the hot clear sky. But irrigation takes a bit of skill and experience. And you may find it strange to live in a country where even gardens have to be irrigated, where the heat is so great that they will wilt in a week, sometimes, between irrigations, and the un-irrigated wild country is semi-desert, with cactus and sagebrush flourishing, and the bunchgrass brown by July.

OF course, if the summers are hot, the winters are mild; in most of the Okanagan the winter temperature rarely goes down below zero, and the snow often lasts only a few weeks. Cars run all winter. The plentifulness of fruit is a year-round joy; you'll experience a new high in taste-delight when you eat your first peach or apricot ripened on the tree. To have all the fruit you want to eat for nothing, with cantaloupe, grapes, tomatoes, and all kinds of vegetables easily grown, is worth a lot too.

Because fruit farms are so small, neighbors are very close; although often the house on the next ten acres, obscured by the orchard trees, is harder to see than that of your prairie neighbor was a mile away. Be-

Clockwise from six o'clock: Gathering trash after pruning; picking; spraying; pruning; trrigating; all laborious physical work which makes up the fruit growers' year. SO YOU WANT TO GO TO THE The farmer who plans to switch from the hazards of prairie COAST? agriculture to fruit growing in B.C. is well advised to satisfy himself on the following points G. E. VALENTINE

cause of the thickness of population, a higher standard of living is possible; electric light and running water are regular services in most Okanagan fruitfarming communities, towns are progressive and citified, there is a general prosperous tone to the country.

That present prosperity, though, may trap the unwary. The Okanagan has one great advantage over the prairie; thanks to irrigation, crop failures are rare. But prices vary here just as they do anywhere else. Today the fruit farmer is sitting on top of the world, receiving up to \$1.90 per box for some apples, 16 cents a pound for cherries, and so on. But those are war prices. Back in 1938 and 1939, it was a very different story; a top of 65 cents for those same apples, with some varieties practically unsaleable, and five to six cents for cherries.

IN fact, prices were low all through the thirties; farmers sometimes got five cents a box or dumped, for an entire load of apples. That's why the Okanagan growers took a step unprecedented for farmers and in 1939 united in a valley-wide farmers' union, the B.C. Fruit Growers' Association, with their own selling agency, B.C. Tree Fruits Ltd., which cuts out price-cutting and controls the market by selling all the fruit grown in the valley—over 11 million packages of it in 1944—over one desk.

They have done well for the farmer in war years; it is hoped that if depression comes they'll be able to hold prices from dropping quite so low again. For you can't make much money growing apples for five cents a box, or even cherries for five cents a pound, and so on; there are too many expenses involved. Irrigation costs you \$10 to \$15 per acre per year, taxes somewhere around the same. Fertilizer almost as much—for it takes heavy applications of commercial fertilizers to keep these orchards producing. There's \$40 per acre per year right there—which means twelve cents expenses against every box of

apples, roughly, and over one-half cent from every pound of cherries.

Apples have to be sprayed too; it's the only protection against codling-moth worm. That alone costs six cents per box even in 1939, more like ten cents now. And then there is all the labor of pruning and irrigating and discing and running furrows, of thinning—with apples—and of picking. The latter costs four cents per box for apples, and 1½ cents per pound with cherries, and other fruits in proportion, even in 1939; it's eight cents and 2½ cents now.

ALTOGETHER, the cost of growing a box of apples couldn't be cut much lower than 40 cents per box in low-price days before the war, even with the utmost efficiency of production; many estimates put it at 50 to 60 cents a box. Not much for the farmer to make there, when the best apples sold for only 65 cents; in fact, farmers in the thirties sometimes did not clear \$50 per acre for hard work, and many went behind.

Today, of course, returns are well ahead of costs; if it cost 40 cents to produce a box of apples in 1939, it probably costs 70 cents now, and many prices are well over \$1.00 a box. How long they'll stay that high is another question.

Of course, if they just stay that high for a few more seasons, one could quickly pay for an orchard; and real estate agents in the Okanagan will tell you airily, "What does it matter if you do pay a thousand an acre or more? Get a thousand boxes of fruit an acre, and unless there's a very unusual drop, you can pay for the place in three years." Which, in some conditions, is true; but there are two other things besides a possible price slump that can enter into the picture to make you sorry sucker bait very swiftly unless you are watchful.

One of these is that the high prices for apples— Turn to page 96

KATRIN, and the Janis took a stance behind the wagon seat, then quietly urged the team forments. "Won't he be surprised to sec us at Kelly's Crossing!" Janis opened her mouth, then without speaking she turned and walked into the cabin with the eggs. Was it really six months since Hal had heard of the fabulous wages offered by the construction company building the highway through the mountains! Six Illustrated by CLARENCE TILLENIUS ANIS LEE was standing by the well straining the evening's milk through a net curtain when the

Webster boy rode into the yard. "You're earlier than usual, aren't you?" She smiled up at him and saw the look of excitement on his freckled face.

"Yep, guess I am." He didn't dismount and go in search of twelve-year-old Carol to ogle; instead he extended the pail of fresh eggs that was payment for the milk. "We're starting for Kelly's Crossing in the morning so after tonight Ma won't be needing any milk for a day or so. We're going to the stam-

"The stampede!" Young Don catapulted out of the sagging barn as though assisted by one of the bay team.

"The stampede!" Carol raced from her hidingplace in the log-cabin.

"Yep." The Webster boy grew in his saddle. "They say that the highway is finished and everybody is going there to celebrate. Too bad you can't go." He smiled maliciously. "I'll bet your father will be waiting there to get a ride back home with us."

With that innate reticence, that serene dignity and pride they always displayed before their loutish neighbor, brother and sister watched the Webster boy ride away with the full milk-can. Yet Janis knew that she must brace herself for the barrage they would let loose once they believed him beyond earshot.

"Mother, let's go to the stampede too! Everybody will be there-cowboys, Indians and miners. Let's go and meet Dad at Kelly's Crossing!"

If only she could say yes! If only she need not crush that eager radiant look on their young faces! Dumb with misery she bent lower over the eggs as though counting them. She couldn't hurt them tonight—she'd let them play about with the shiny new idea for a little while. They had so little to amuse them she must let them have this small joy overnight.

"We haven't seen Dad since March!" Don recalled

now as he ran to replenish the mosquito-smudge beside the cow in the crude corral. "And even then he knew what he was talking about-he said that the highway would be finished near the end of summer. I wonder what kind of work he got."

"He wanted to drive a tractor, I remember," Carol expertly shot the poplar-poles in place that closed the corral and happiness was in all her movelong, lonely months since he'd exclaimed excitedly, "I can make a thousand dollars this summer, Janis! It'll be tough on you alone with the youngsters, but think what the money will mean to us! Decent clothes, a radio, some machinery and maybe lumber to build a better house!"

A thousand dollars. It loomed as large as a million! Decent clothes—tears came to her eyes at the prospect—after four years of cast-offs. A radio—to be part of the world again! A better house to replace the leaky log hut! The spring and early summer hadn't been too tough without him. She and the children had plowed some land and planted potatoes and other root vegetables; fought off a grass fire when their nearest neighbors-the Websters three miles awayhad let a clearing-blaze get out of control; they had

dragged the bay team out of a treacherous piece of muskeg, and once for seventeen terrible hours they had lost Katrina. Katrina. the dreamya patchwork quilt and was their most precious possession. No, things hadn't been too bad

at all-except not hearing from Hal. Yet cut off as they were how could she? That's why the Webster boy's report about the completion of the highway and the celebrations had been such a surprise. In the strangest manner news filtered through the bushland, over the Peace River and deep into the interior where only a handful of settlers lived.

Don's bare feet pattered across the hard, earthen floor. "Mother, this is Tuesday-let's go tomorrow early — even before the Websters!"

Carol followed quickly and lent her weight. "Yes, let's beat them. Just this once!"

Janis could understand their desire to triumph over their neighbors for with one exception the Websters were much better off. They had a larger By Nan Shipley

house and better one and they had a good deal more land cleared and under cultivation. Not that it mattered about the land-it was too difficult to transport grain down to the railhead nearly two hundred miles away. Both Hal and the Webster men had made that bitter discovery four years ago when the land had yielded such a bountiful harvest—a harvest garnered by the most primitive methods since it had been impossible to get farm implements into this remote district. It had taken the men nine days to make the return trip with exhausted horses, worn-out wagons, and the money received for their produce negligible in the face of such transportation difficulties.

"Maybe we could even leave tonight!" Don cried impulsively.

'Mother, let's make a head-start . . ."

"Just a minute," Janis cautioned, alarmed at the speedy race of their enthusiasm. "Have you both forgotten how long it took us to travel in here from Kelly's Crossing, and what a hard trip it was?"

They met her eyes unflinchingly. "No."

HOW could they ever forget that grueling journey by wagon after Hal, beaten by years of drought in the southern part of Alberta, had taken up unseen land in the Peace River District!

"But we're older now," Carol pointed out.

"And Kelly's Crossing is only sixty-five miles away." Don reminded.

They were driving her to it! Janis avoided their eyes as she blurted, "We can't go! It would take a couple of days' travel. Where and how would we live when we got there?"

"We could live in the wagon—under the canvas if it rained—like we did when we came here."

"No. It's no use," she sighed. "I wish that we could go. I'd like to see something besides bush and the Websters, believe me. But we couldn't leave Katrina that long alone."

There was no skirting that fact—they could not leave Katrina. She had been bought at such great cost—Hal's gold watch and Janis' last good dress and had been their mainstay all through the

winter—particularly after the Websters' cattle had drifted before a terrible five-day blizzard and never been seen since. Katrina was the one thing that gave the Lee family superiority over their neighbors and even for so marvellous an event as a stampede she could not be neglected.

With all her soul Janis prayed that her husband eyed little cow that resembled be given back faith in

> Watching her children's faces grow dull with disappointment Janis heart shook as she considered the great injustice she was doing them.

Once it had seemed to her that raising children on virgin land, teaching them a sound appreciation of the rewards of their labor and the subsequent instillation of country pride and true national loyalty, had been the ideal upbringing. But that was before Hal had settled so far from civilization and it was cruel to deny them the simple pleasure of the

They sat, two dejected figures in faded, worn overalls on the broken steps of the log-cabin and stared

Turn to page 52



HE loss from wheat rust which farmers sometimes have to bear is a manmade cross. The wild wheats of primitive times were probably not seriously attacked by rust. But when men developed more palatable sorts of wheat, the rust parasite endorsed human preferences and rust damage multiplied as the acreage of high grade wheat increased. Furthermore, density of population facilitates the spread of epidemics, as humans first discovered in the medieval

ravages of the plague. When the plains region from Texas to Saskatchewan became one vast wheat field, the result was the rust epidemic of 1904.

The solution was fairly obvious. Some rust resistant wheat like the well known Durum, or the little known emmer, a wild, Palestinian species with nothing else to recommend it, could be crossed on a high grade wheat variety. Sooner or later one of the progeny would be found which combined the disease resistance of one parent with the quality of the other. But success was elusive. Like the familiar horse-donkey cross the second generation did not lend itself to perpetuation.

Finally in 1916 E. S. McFadden made his historic cross between Marquis and Yaroslav emmer, and about the same time Dr. H. K. Hayes made his first macaroni-bread wheat crosscs. Those who built on McFadden's work eventually produced Renown, Regent and other varieties. From Dr. Hayes' material have come varieties like Thatcher. Workers borrowing from both sources have produced Apex, Newthatch and other varieties. From their combined efforts the wheat farmer has been delivered from the nightmare of rust

The plant breeders and plant pathologists who have devoted years to the production of these new varieties are not infrequently asked the question: "Are your new varieties resistant for all time or will they lose their resistance in a few years?" It is a

question that may bring a frown or a puzzled smile to the face of the expert—for it is one he has often asked himself.

Usually the answer goes some-

what like this: "They will not lose any resistance they have at the present time, but that is not to say that they will be resistant indefinitely. How long they will remain resistant will depend on the ability or inability of the rust to develop new strains that will

ACTUALLY, the question can only be answered by time, for no one knows the answer. There is, however, in existence a large fund of knowledge concerning the nature of rusts and other microorganisms that can form the basis of intelligent specula-

Most species of microorganisms are made up of different strains. These look alike but differ in their habits or products. Thus, for example, in Penicillium notatum, the mold that produces penicillin, there are several strains that differ in the quantity and the quality of compound they produce. There are at least four penicillins produced, known as F, G, K, and X, and various strains of the organism differ greatly in the amounts of the different penicillins they produce.

In the yeasts, certain forms that look alike differ greatly in their capacities to manufacture the different vitamins of the B complex. Likewise, yeast strains differ very considerably in their effi-

ciencies as producers of alcohol.

The two rusts that

attack wheat - stem rust and leaf rust-are each made up of many strains that differ in their parasitic abilities. These strains are known as physiologic races. Many of the races of wheat stem rust attack the common bread wheats in preference to macaroni wheats or emmer wheats. Some seem specially adapted



Will present-day rust resistant varieties continue to provide adequate protection?

to macaroni wheats, others to emmer wheats, while still others attack all three types of wheat indiscriminately.

Before a new rust-resistant wheat is released for distribution it is subjected to years of rigorous testing to make certain that it is resistant to all the races of the rust that are known to occur in the region in which it is to be grown. It is therefore known with certainty that none of the races that are at all common will attack the new variety. But it is always possible that there exists in small amounts somewhere in such a vast territory as say, North America, a race

that is capable of attacking and damaging the new variety. If such a race should exist, it is likely to come into contact with the new wheat sooner or later; and when that happens the race may spread rapidly and, perhaps, gain general distribution throughout the region in which the new wheat is grown. The new variety will then no longer be a rust-resistant wheat—not because it has lost any of its resistance, but because a new and parasitically different strain of rust has become predominant.

Even if no such parasitic strain of the rust existed when the new variety was distributed, it is still possible that it might come into existence sooner or later-for rusts, like all other living things, have to some extent the power of adjusting themselves to new conditions. If they

did not have that power, there would probably be no rusts in existence at the present time. Most rusts, like higher plants and animals, have at one phase of their life cycle a sexual stage. Looked at from the evolutionary point of view the function of sex is to increase the variability of the organism—to

ensure that all its various potentialities have a chance of coming into play.

Now, the sexual stage of stem rust occurs in that phase of the life cycle spent on the barberry, and it is therefore in this connection that the barberry is of importance. It has been clearly demonstrated that a much greater variety of physiologic races occurs on rusted barberry than on rusted wheat. If all the common barberry present in North America were destroyed, we would still have stem rust,

but the chances of new races originating would be greatly minimized.

By T. JOHNSON

Dominion Rust Research Laboratory

A NOTHER way in which new strains of rusts may come into existence is by a process called "mutation." Mutations occur now and then in most organisms, in higher plants giving rise to new types known as "sports." Almost any gladiolus fan will be able to name one or two varieties of that plant that are supposed to have originated in this way. Mutations are definitely known to

represent new rust-resistant varieties.

In view of these powers of adjustment of the rust organism it is clear that any rust-resistant cereal variety is subject to a hazardous existence. It is hence of interest to examine briefly how the rustresistant varieties thus far distributed have stood up against the concerted attack of the numerous parasitic strains that make up the rust organism.

The rust-resistant wheats thus far distributed to farmers were primarily produced to withstand the ravages of stem rust, the more dangerous of the two rusts that parasitize wheat in the plains region. Thatcher, the first to be released, though highly resistant to stem rust, has no resistance whatever to leaf rust. The varieties that followed Thatcher-Apex, Renown, Regent, and Redman in Canada; Rival, Pilot, Cadet, and others in the United Statesshowed high resistance to stem rust and all except Apex possessed a moderate resistance to leaf rust.

Do these varieties show the same degree of resistance to stem rust now as they did when they were distributed to farmers ten or a dozen years ago? The answer is that their resistance to stem rust is much the same today as it was then despite the fact that a considerable change has occurred in the physiologic races of the rust since they came into cultivation.

There is no guarantee, how-

ever, that they will remain resistant indefinitely because there exist, in other parts of the world, strains of stem rust that can rust them severely: and even here in North America a strain of rust has been found which can do severe damage to them.

Germinating spores from the barberry find their way into the breathing pores of the wheat plant.

known as race 15B is however, of rare occur-

This strain.

rence and has caused no appreciable damage as yet. But it is clear that if this strain or others with similar diseaseproducing powers should gain wide distribution, there would be an end to the high stem-rust resistance shown by these new wheats in past years.

The fate of the Australian wheat variety Eureka is indicative of what can happen to a rust-resistant wheat. This variety was distributed to Australian farmers in 1938 as a variety with adequate resistance to the stem-rust races present in Australia. Its resistance did, indeed, prove adequate for a number of years. In 1941, however, it rusted heavily in certain areas and a year or two later it had to be classed among varieties susceptible to stem rust. The reason for its sudden loss of resistance was the rise to prominence of a stemrust strain not previously known in

As stated earlier, the leaf-rust resistance of our new wheats was

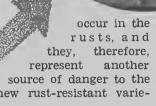
never as great as their resistance to stem rust; and today it is appreciably less than it was when they were

distributed. The reason is not to be found in any change in the varieties themselves which are kept to type by the efforts of our agronomists and pureseed growers. Rather it is to be found in the appearance of a number of new strains of leaf rust that have greater powers of parasitizing the new wheats than the strains that were common when these wheats were produced.

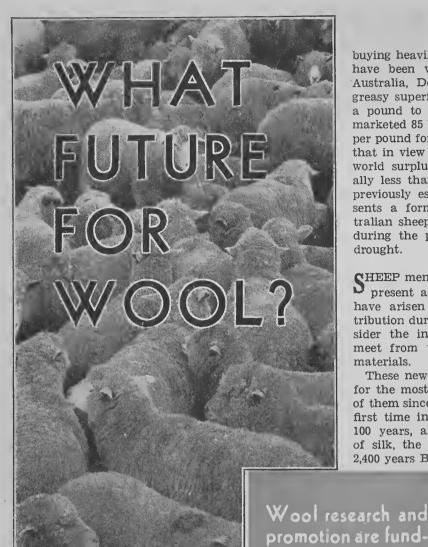
ter-cup stage of the rust organism's

It may be that these rust strains were already in existence, though quite rare, when the varieties first came to be grown. It may be that they have come into being during the last dozen years or so. Fortunately, leaf rust has not anywhere nearly the Turn to page 44

The early summer stage is passed on the barberry plant. A portion of a barberry leaf showing the clus-



Rust winters over on stubble



HEEP are not a prominent feature of the rural landscape in Canada. The truth of the matter is that Canadians do not appear to like especially either mutton or lamb. We produce less than 20 per cent of the wool we use. In other words, we use around 60 to 75 million pounds of wool per

year, of which we import around 50 to 60 million

pounds.

Early in the war, Britain purchased the wool clips of New Zealand, Australia and South Africa, where the combined sheep population is normally more than 150 million, or about one-quarter of the entire world sheep population. World wool production is around 2.5 to three billion pounds, of which the United Kingdom, Australia, New Zealand and South Africa ordinarily provide about 1,300 million pounds or more.

Most of the world's surplus wool in the five major wool exporting countries (Australia, New Zealand, South Africa, Uruguay and Argentina), accumulated during the war to the credit of the United States and Great Britain. By the end of the war, a large quantity of wool was thus piled up, which it had been estimated would require 12 years to absorb, even if the main consuming countries, other than Germany and Japan, increased their buying of Dominions' wool by 20 per cent. Before World War II, European and Japanese markets absorbed a billion pounds of wool each year. Taking the five-year period 1934-38, and the saleable wool surplus from main wool-producing countries, Great Britain bought 27 per cent, France and Belgium 29 per cent, Germany 12 per cent, the rest of Europe 12 per cent, Japan 10 per cent, the United States six per cent, and other countries four

World stocks of wool are now heavy. Delegates from 13 interested countries met in London in November, 1946, to review the world situation of apparel wool. Total world stocks of apparel wool, as of June 30, 1946, were estimated at approximately five billion pounds, grease basis. More that half of this was in the hands of governmental organizations, or an amount almost equal to one year's production. It was recognized, however, that world wool statistics are now not entirely reliable, and unanimous agreement was reached that a wool study group on an international basis should be organized.

On the other side of the picture is the fact that the demand for wool has been quite unexpected during the postwar period. European countries have been

buying heavily of the cheaper grades. Prices have been very high. At the Melbourne, Australia, December wool sales, a bale of greasy superfine Merino wool sold for \$1.62 a pound to U.S. buyers. The grower, who marketed 85 bales, averaged around 81 cents per pound for his entire clip. It appears now that in view of heavy current demands, the world surplus may disappear in substantially less than the twelve or thirteen years

previously estimated. Nevertheless, this surplus presents a formidable problem, notwithstanding Australian sheep losses estimated at around 23 per cent during the period of 1943-46, as a result of severe drought.

SHEEP men are not solely concerned, however, with present and prospective surpluses of wool, which have arisen due to interference with normal distribution during the war years. They have also to consider the increasing competition which wool must meet from the newer synthetic fibres and textile materials.

These new, competitive fibres have been developed for the most part since 1919, and a large proportion of them since 1939. Artificial silk, called rayon for the first time in 1924, has a history going back nearly 100 years, and was the first important competitor of silk, the development of which began in China, 2,400 years B.C. Cotton was woven by hand for thou-

sands of years, until the development of mechanical methods in the 18th century. The use of wool for clothing emerged long ago from the sheep skin era and the fur of other animals has been in use for clothing since the beginning of the Christian era.

Competition between the older (natural) and the newer (synthetic) fibres is now very keen and is due to become even keener. This competition is developing, not alone between synthetic and na-

tural fibres, but between each of these and mixtures of the two: and the time has arrived when, instead of endeavoring to invent

and develop synthetic fibres to equal the natural fibres, the latter must now be improved and developed to keep pace with the synthetics.

amental to success-

ful competition with

synthetic fibres. The new Dominion

Wool Research

Laboratory at Leth-

bridge seeks im-

provement in fleece

weight and quality.

Today, textiles are being manufactured, or are about to be manufactured commercially from coal (nylon), milk (aralac), glass (fibreglass), coal, salt and gas (binyon), petroleum and brine (selon), peanuts (sarelon), corn (zein), chicken feathers (un-

named), and perhaps some other materials. In some cases these synthetics are manufactured by combining artificial or natural fibres with plastics. until almost every use involving combinations of color, sheerness, beauty, warmth, non-inflammability, durability and sturdiness is served. New color combinations, fabrics that do not muss easily and seldom need ironing, curtains, drapes and bedspreads, as well as industrial materials, are all here today and more are on the way.

These new developments present an undoubted challenge to the sheep men from the major wool exporting countries. At least some of them are taking up this challenge. A Wool Use Promotion Fund is being built up in Australia, based on the Wool Use Promotion Act of 1945 and the Wool (Contributory Charge) Assessment Act 1945. Under this legislation five per cent of the amount realized from the sale of an estimated 1946-47 clip of three million bales will go into the fund, and might realize for this year £3.4 million Australian (£1 Australian-\$3.22). United States sheep men of the south are urging new and improved wool breeds, and it is to be expected that the world sheep and wool industry will gradually awaken to the necessity for making the most of the natural advantages of wool.

In Canada, strange as it may seem, and relatively small as our sheep industry is, research work is fully abreast of and in some respects in advance of similar work in other kinds of livestock. An

By**FRY**

illustration of this is the Wool Research Laboratory which has recently been established at the Dominion Experimental Station, Lethbridge. This laboratory is the direct result of the work of the Sub-Committee on Wool of the National Sheep Committee, and the recommendation for a laboratory for the study of wool goes back to 1937. Actual work on the laboratory was begun in the fall of 1944, and

work on wool was begun in the new laboratory in the spring of 1946. Credit for early work in wool research in Canada also goes to the Associate Committee on Wool of the National Research Council, but gradually the organization of research work between this organization and the Dominion Department of Agriculture is being sensibly arranged so that production problems are being shifted to the Department of Agriculture, and industrial problems to the National Research Council.

THE central problem in wool research, from the point of view of the producer and breeder, is the study of the wool fibre, and of fleece weight. This is the work under way at Lethbridge and under the guidance of Dr. Carl Rusmussen, Assistant Superintendent in charge of Animal Husbandry work at the station, and also in charge of the Wool Research Laboratory when I visited the laboratory some time ago. Working with Dr. Rasmussen in the laboratory is S. B. Slem, wool specialist; and also interested in these research studies from the angle of sheep production and management are Frank Whiting (Animal Nutrition), and W. M. MacNaughton (Production and Management).

Work in sheep improvement and breeding has been under way in western Canada for quite a few years, and some work with wool was previously done, though seriously hampered by inadequate facilities. At the present time, the laboratory serves as a tie-up of four institutions, the Dominion Experimental Station at Swift Current, the Range Experiment Station at Manyberries, the University of Saskatchewan at Saskatoon, and the Lethbridge station. For convenience, the 34x44-foot laboratory building is also used as headquarters for the animal husbandry work of the station, but its real function is the work in wool research. The various rooms in the building, aside from the offices, are designed for different purposes, and through them the raw wool passes progressively until the final determinations are possible on the scoured and



BIG

HE bull Danny was trailing had travelled slowly for the last mile. Danny mounted a little knob, where the bull had apparently stopped, and looked ahead. The next tracks were eight feet beyond. From that point the bull had run. Danny raised the thirty-thirty carbine to his

shoulder, and slipped the safety off. When he went forward again he walked slowly and quietly. For he knew that here the bull had scented Old Majesty, and started to run for his life.

Forty feet farther on, the tracks of a monster bear emerged from the beeches and joined those of the bull. Danny knelt, and laid his spread hand in the bear's paw mark. The imprinted track was longer and wider than his hand. Old Majesty! Danny rose and skulked on, careful to break no twig, rustle no leaf, and make no other noise that might reveal his coming. A hundred times he had stalked this great bear whose name had become a legend. But this time he might get the shot that he had so long awaited. Then, a hundred feet ahead, Danny saw what he was looking for.

The bull lay on its back in a little forest glade. Its head was twisted grotesquely under its body, and one lifeless foreleg thrust crookedly upward. Danny stood still, peering through the trees for some sign of the monster bear that had won another victory against the human, beings with whom it was eternally at war. But all he saw was the wind-rustled trees and the dead bull. The bear, with his customary cunning, had put a safe distance between himself and the dangerous rifle in Danny's hands.

Danny went forward, and looked down at the fine young Holstein. The bull's neck had been broken by a single blow from a sledge-hammer paw, and there was a hole in its belly where Old Majesty had started

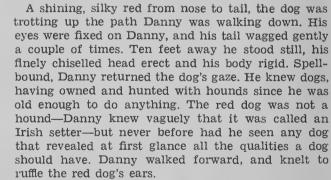
"Wonder how Mr. Haggin'll like this," Danny murmured to himself. "Another bull gone."

He looked again at the bull, dead scarcely ten minutes and fifteen hundred pounds of good beef. But it was Mr. Haggin's, not his. Still, it would be a neighborly act to see that it didn't spoil. Danny bled the bull, and ripped its belly open with a knife so it

wouldn't bloat. Keeping the rifle ready, for he was afraid of the bear, he backed away from the bull's carcass and started off through the

With the shuffling, loose-kneed gait of the born woodsman he walked mile after mile, through the beeches, past the clearing where, by the grace of Mr. Haggin, he and his father were allowed to live, over the bridge at Smokey Creek, and on to the edge of Mr. Haggin's Wintapi estate. Danny stopped there. He had seen it before. But the sight of such luxury never failed

beeches.



Illustrated by

CLARENCE TILLENIUS

"Hi boy," he said. "How are you, Red?"

THE red dog quivered, and raised a slender muzzle to sniff Danny's arm. For a moment Danny petted him, then straightened up. When callers came visiting him, he didn't like his hounds played and tampered with. It spoiled them, made them harder to handle. And certainly Mr. Haggin wouldn't want this red dog played with either. When Danny walked on the red dog kept pace, walking beside and looking up at him. Danny pretended not to notice, and went straight to the horse barn where Robert Fraley, Mr. Haggin's overseer, was directing two grooms who were saddling two restive horses. Robert Fraley hailed him.

"What do you want?"

Danny stiffened. Sometimes he just didn't like the way that Fraley acted, as though he owned the place and Danny was just dirt under his feet. And his business was with Mr. Haggin. [Turn to page 67

JIM KJELGAARD look. Mr. Haggin's carefully

THE COUNTRY GUIDE



to impress him and was always worth another

nurtured acres stretched

as far as the eye could see. Thoroughbred cattle grazed in the elaborately fenced pastures, and blooded horses snorted in the paddocks. Mr. Haggin's grey barns, big as all the other barns in the Wintapi put together, rose in the centre of the estate and beside them were the six miniature mansions Mr. Haggin had built for the families of the six men who worked his farms. Mr. Haggin's house, a huge, white-gabled one protectively surrounded by imported blue spruces, was some distance from all the rest. Danny eved it, then forgot everything but the red dog that was coming

O doubt the cheapest and by far the most abundant source of power and still the least used, is the wind. Man has had sailing ships on the sea, and windmills on the land, but it's always the same old story. They are fine when the wind blows, but both the ships and the pumps stop during calm spells.

There is one form of wind power, however, that has proven very useful, and that is the wind-electric farm lighting plant. They can, by the use of storage batteries, provide both light and power when the wind blows and during short calm spells too. Given a well designed propeller and a specially made generator, winds from seven to thirty miles per hour can generate a good flow of current. In gales of over thirty-five miles per hour, the older types should be turned out of the wind. The newest ones shut down automatically eliminating the possibility of damage from boisterous weather.

The answer to the question of what to do in calm spells is the use of a good set of storage batteries. Let us compare the wind-driven generator to a winddriven well pump, and the storage batteries to a water tank set high in the air. The bigger the pump or the generator, the quicker it will fill the tank or the batteries. The bigger the tank or the batteries, the more water or the more electric power they will hold.

How long the supply of water or current will last will depend on two things—the size of your tank or your batteries, and the amount of water or current you draw. But here is an important point. The more water you use, the more value you will get from your water system, and the same applies to your electric current. It is very nice to have even one bright light

over the dining room table, but far better to have good lights all over the home and farmyard, with power to spare to run the washing machine and iron, and even to pump water too. Well, there is plenty of power in the wind if we want to use it.

There are two very outstanding things about farm electric plants. The first is that I have yet to learn of a case where a person has sold his plant and gone back to other forms of light, and the second is that I have still to hear of a case where a plant has been traded in on a smaller one. This is especially true

> of the batteries. Once you install a plant, you'll keep finding more and more uses for both light and power, and



the more use you make of it, the more benefit you'll

If the wind blows an average of one day or more out of every five in your district, then the chances are that a well designed and well balanced wind-electric plant will probably provide by far the cheapest source of electrical power for most farms and ranches. The only better form is "power" or "hydro line."

It seems to me that I heard a great deal about rural electrification before the last election, but very little since. Let me tell you just how that stands. In the first place you have to have at least three farms to each mile of power line, so if you live in a district where the farms average more than half a section in size, you might just as well forget about a power line. They are fine for fruit, dairy or truck farms, like they have in parts of Manitoba and Ontario and some of the valleys in British Columbia, but out on the open plains it just isn't practical. Therefore, if there are any vacant farms, big farms or small ranches between your place and the power line, you might as well forget about hydro power, for there won't be a line out your way in your lifetime.

THE next question is: "What will a farm electric plant cost and what will it do?" Those questions have some bearing on each other, for you can do more with a more expensive plant than with a small one. But a good useful outfit will cost somewhere between \$500 and \$1,000.

If the batteries are given good care, they should last seven years or more, and both the engine and the wind electric will last longer. Although the first cost may seem a little high, it should really be spread over

What it will do is to provide a twenty-four hour a



small towns and villages have, for many of their plants only run from sunset to midnight. It will give bright, clear, silent and odorless light, and power enough for the washing machine, electric iron, radio, water pump and small motors for the farm machine shop.

It is advisable to explain a little about voltage for you. In your car or truck, there is a six-volt system. That is enough power to supply two bright headlights, several smaller lights, toot the horn, wipe the windshield, drive the heater motor and perhaps run a radio. In other words, it can supply light and limited power from one end of your car to the other, or about fifteen feet.

If you should try to lead two wires from your car to a light in the barn a hundred yards away, the light would be very dim. To have power enough to get around

most farm yards, you need more than six volts. Most farm plants are 32 volts. Most cities are from five, ten or up to fifteen miles across. Thirty-two volts would not be strong enough to travel that far, so they use 110 volts.

Now, if you have a big waterfall two or three hundred miles away, even 110 volts current isn't strong enough to come that far without a great deal of what we call "line loss." So, by the use of transformers, they "step it up" to perhaps as high as 22,000 volts, and when it gets to the city limits, they "step it down" again to 110 volts.

Here is another thing to remember. The brightness of your light is not controlled by the number of volts. A six-volt headlight on your car or truck may be far brighter than the 110-volt bulbs in a city home. It is necessary to use the higher voltage to get the several

hundred yards of distance around most farm yards, for once you have electric lights in your house, you'll certainly want them all over the yard

If you have a bright farm boy around the place, he may want to get an old car generator, whittle out a propeller from a piece of two-bysix, then wire up the generator to a switch and circuit-breaker and on

to a car battery. He could then hook on a few six-volt bulbs, yes, and even get a couple of bright lights—at times. It may be a mighty fine thing for the boy to do, it won't cost much, and he'll learn a lot about electricity and wiring—the hard way. But if you have a fair sized farm and want lights in every room of the house, down in the barn and out in the shed too, don't stop at six volts. Get a wind-driven 32-volt plant, a good set of batteries, and do the job right while you are about it.

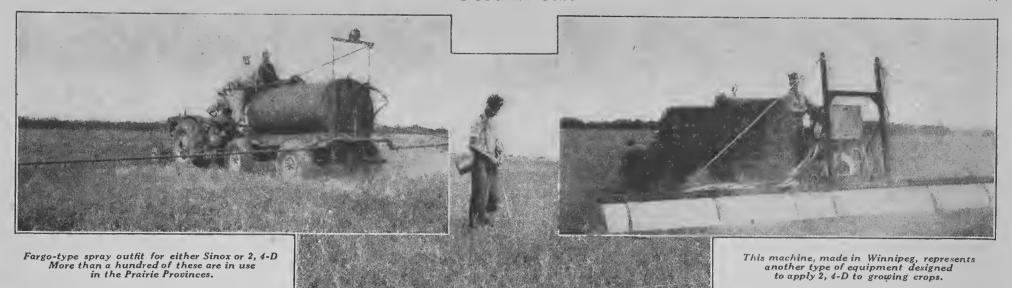
DID somebody ask, "Why stop at thirty-two volts? Why not go to 110?" I'll tell you why. It costs too much, for each cell of a battery puts out only two volts, regardless of how big the cell might be. You must remember that your car or truck battery is a battery that has three cells in it. Three cells of two volts each makes the six-volt system.

The lighting plan battery is like that too. Each of those big glass jars, even those as big as a milk pail, still gives just two volts. Each cell may cost up to fourteen dollars or more, or the sixteen needed to make the thirty-two volts will cost more than \$200, depending on the size. Now, if a 110-volt plant is wanted, it is necessary to have not just sixteen, but fifty-five cells. They would still cost \$14 or more each, making a total of nearly \$800 instead of just over \$200, so buyers usually settle for a 32-volt system.

The next question is, does the wind blow strong enough and often enough in your district to make a wind electric plant practical? Modern, well designed, factory built machines start charging in a seven mile per hour breeze. The propeller will even start to turn at about five miles per hour, but won't drive the generator fast enough to make it charge.

From about ten to twenty-five miles per hour, the plant will charge at a good rate. Above twenty-five miles per hour is when those funny looking air brakes on my make of machine come into use. They open and act as a brake, keeping the charging rate to within safe limits. If the wind blows above thirty-five miles per hour, I must turn my mill out of the wind, and this is done by turning a crank and winding in a wire at the base of the tower. This brings the tail around in line with the propeller instead of at right angles to

Turn to page 80



AN'S age-long struggle to suppress weeds has led to the introduction and trial of many and varied means of control. Not least of these has been the contribution of scientists in the form of chemicals or herbicides, as they are termed. After trial and demonstration many of these have been found wanting and have gone into the discard. Latest, and much publicized, is the quite recent introduction of 2,4-Dichlorophenoxyacetic acid, popularly termed, 2, 4-D.

Late in 1944, two Cornell University professors

reported on trials carried out with 2, 4-D in which spectacular results were claimed in weed destruction. This started off what may prove to be the most widespread and extensive series of trials and demonstrations that has yet taken place on this continent in testing a product in the field of agriculture. In almost every state of the Union, as well as in all Canadian provinces, weed men have been testing and working with 2, 4-D as a weed killer during the past two seasons.

This new substance belongs to the hormone group, so designated because their unique energizing effect gives them a special usefulness as plant

stimulants or growth regulators. Credit for the discovery of 2, 4-D belongs to a group of research workers at the Beltsville, Maryland, experiment station maintained by the United States Department of Agriculture. These scientists found that when certain of the hormone compounds were applied to plants in relatively large amounts, they injured rather than stimulated the plants, sometimes killing them. Quick to realize the great economic importance to the farmer of any chemical which might be used to kill undesirable plants, they eventually produced 2, 4-D as a chemical selective weed killer.

To discover a substance which, when applied to a weedy crop, will kill the weeds and leave the crop unharmed, is indeed notable evidence of the value of science to agriculture. Tests now under way with 2, 4-D are designed to discover the limits of its use-

fulness, both as to killing power and cost. Worth noting, too, is the fact that unlike most commercial products, its sale is not controlled through patent rights. Since it was discovered by scientists at a government institution, the 2, 4-D formula is not owned by anyone, and anyone is free to manufacture

Adding to its wider use and popularity is the fact that 2, 4-D is non-poisonous, non-corrosive and non-flammable. It is a pure acid and for practical use it must be combined with a solvent, or sold in some other form, such as a salt. Actually, it is available in four principal forms: (1) in powder form, as a salt of sodium or ammonium; (2) as an acid, generally in combination with some other substance; (3) as an ester, which is a combination of an acid and an alcohol; or (4) as an amine salt, a substance derived from ammonia. In one or more of these

SELECTIVE Acquires A The appearance of 2, 4-D H. E. WOOD as a selective chemical weed

Agriculture

killer is one of the most signi-

ficant developments in agricul-

ture. This article is an up-to-

the-minute discussion of

the subject

forms, 2, 4-D is available either as a liquid or as a dust.

UNLIKE so many standardized products one buys these times, 2, 4-D comes in a wide range of strengths or concentrations. As the sodium or ammonium salt, the concentration is usually quite

high-60 to 80 per cent, or even higher. In the three liquid forms it is not possible to manufacture such high concentrations: Here the concentrations range from as low as 10 to a high of 40 per cent. Dusts range from five to 15 per cent acid content. Purchasers of 2, 4-D should familiarize themselves with the concentration of the brand they are purchasing.

Choice of material for treatment will be determined to some extent by the weed species on which the chemical is to be used. Price will also be a factor. Experiments to date have established the advantages of certain forms of 2, 4-D over others for certain species of weeds. For the weeds susceptible to 2, 4-D, of which dandelions are a typical example, all are satisfactory. In treating the weeds or woody plants that offer a measure of resistance to 2, 4-D, some preparations react more advantageously than others.

This, in part may be on account of the sticker and spreader added, or to the more penetrating nature of the material. Indications point to the esters being more effective on the more resistant plant species.

Whether spraying or dusting as a method of applying 2, 4-D is the more satisfactory, time alone will tell. In general, with insecticides and fungicides, the move is toward the use of dusts. However, at present spraying is favored as a method of applying 2, 4-D. For small lawns and for patches of weeds around the home or farmstead, the knapsack sprayer will be found convenient and satisfactory. Except where equipped with finely perforated openings, the garden watering can is rather unsatisfactory. The solution so applied tends to run off the plants. For large lawns and boulevards, a barrel mounted on wheels with a hand pump, hose-line and boom carrying four nozzles will be found convenient. For larger lawns a small power outfit may be desired.

For golf courses and for field work large power equipment is essential. In districts where water is available, the boom sprayer, with low pressure pump -50 to 60 pounds pressure—driven by a gas engine, and with a large tank, the whole mounted on a truck or trailer, has come into use in recent years. One such spray rig coming into general use is equipped with a 40-foot boom. This sprayer will treat 50 to 100 acres daily. Within the past year a turbine-type, combination duster-sprayer has been demonstrated and is now being sold. This machine will operate as a duster, or as a sprayer, using as little as three to five gallons of water per acre. It should be possible to treat 200 acres or more daily with this outfit.

Very limited trials have been conducted with dusts containing 2, 4-D. On one strip of wheat near Ste. Agathe, Manitoba, dusted with a five per cent 2, 4-D, excellent eradication of mustard was obtained, with a marked increase in yield as compared with the untreated portion of the field. A few demonstrations with aeroplane dusting have been held, but this method of application needs further trial before passing an opinion on its effectiveness or practicability.

SOON after its introduction, 2, 4-D became the accepted treatment for ridding lawns, boulevards, and golf courses of dandelions, broad-leaved plantain and chickweed. Except with the bent grasses, it is "selective" to grass. In other words it does not damage the grass. White Dutch clover which is

> usually present in lawns, though killed back, soon recovers.

> Quite extensive trials on lawns were conducted in 1945 and 1946, by the Manitoba Weeds Commission co-operating with officials of the Winnipeg Parks Board, the University of Manitoba, and the Dominion Experimental Station. Morden. In addition to testing the effectiveness of the different formulae, the trials were planned to determine the best concentration, rate of application, season of year and temperature at which application should be made. In general it was found that all formulae gave satisfactory results; that a .1 per cent concentration at about one-half imperial gallon per square rod (80 gallons per acre) was the proper mix; and that the weeds responded to treatment best when growing actively in the spring and early fall, although even during summer dormancy, satisfactory kills were obtained. Without question

> > Turn to page 78

This field was treated with 2, 4-D dust for wild mustard and clearly shows an effective kill on the dark, treated portion, which also produced a marked increase in yield.



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No. 3

Mr. Towers' Warning

Speaking of credits, there are dangers to those who grant them as well as to those who receive them. Governor Towers of the Bank of Canada had this in mind when he called attention to the role of credits in the flourishing condition of Canada's export trade. A considerable proportion of the sales abroad are on tick, paid for out of credits voted by parliament to other countries. These credits totalled \$1,845 million, of which about a billion remained unspent at the end of 1946. The time will come when they are exhausted and in the international balance of trade other nations will be able to take only what they can pay for. In addition, the deferred payments will presumably be made and Canada will have to take goods in payment, which will tend to throw the balance of trade the other way.

Canadian prosperity depends on export trade. Nobody has the temerity to deny that in the face of universally known facts. But export trade, like any other kind, needs intelligent direction. Without intelligent direction it can lead to disastrous consequences. In fact the present situation resembles somewhat that of the hectically prosperous twenties, which were followed by the depressed thirties. Foreign trade was then stimulated by enormous credits by American financial houses, principally to Germany and South American countries. When international trade was at its height finance became jittery, credits dried up and panic followed. In the year 1929 international trade reached an all-time high and from that height the world was plunged into the most prolonged and sodden depression it has ever experienced. It should not be forgotten that the United States has extended credits and on a scale which dwarfs any effort this Dominion can make. Let these two countries take care that, when the credits are exhausted, the experience of 1929 and the years that followed is not repeated. Canadians, as Mr. Towers properly warned, are going to require all the wits, ingenuity and capability of maneuvring they can muster to meet the situations they will have to face.

Mr. Lippmann's Pessimism

Walter Lippmann, top notch American commentator, trembles for Britain's immediate future. The causes of his pessimism are these: Britain, shorn of most of her income from foreign investments, will have to export 175 per cent of her 1938 figure to remain solvent. The Canadian credit will be exhausted in a year and the American credit in two years, though they were expected to spread out until 1951. That means that sometime late in 1948 the 175 per cent objective will have to be reached. It can't be done. Britain's industrial plant, none too modern to begin with, could not be adequately maintained during the war. She has an acute manpower shortage. Her people are tired and the austerity program is bearing down heavily upon them; they have neither the stimulus of war nor the compulsions of a totalitarian state to force them to further supreme effort. Commitments in Germany, the Near East and in southern Asia are a costly drag on her resources and manpower. The time is too short and the margin too thin to balance her imports and exports before the credits are exhausted. A crisis looms, a serious and perhaps disastrous crisis. It may swoop down next year. Thus Mr. Lippmann.

A less gloomy, but still serious view is held by British economists, as quoted by Saturday Night. After pointing out that although Britain had a visible adverse balance of trade for 1946 of \$1,300 million, far less than was anticipated when the American credit was negotiated, and only a little more than one-half the adverse balance of 1945, that journal quotes an outstanding British financial expert to this general effect: British firms have been exporting extensively to "soft currency" areas such as the continent, the colonies and the Middle East, where the exchange rates are favorable and the profits high. For example, if a private firm can make a profit of 25 per cent by shipping to France it will not ship to the United States at a profit of five per cent. But "soft currency" countries are not paying cash on the barrel head. They are buying on credit and Britain is therefore building up her own credits abroad though she is using up her Canadian and American credits faster than if shipments were strictly C.O.D. This building up of credits on her own account is a point evidently overlooked by Mr. Lippmann.

It is realized in Britain, however, that this kind of business cannot go on forever. Something must be done to channel more exports to "hard currency" countries, which would mean chiefly to Canada and the United States. That would slow up the use of the credits. It could be done through export licensing, the allotment of raw materials and such measures. Evidently the British economists are aware of the situation, are more authoritatively informed than the American journalist, and have constructive suggestions to offer. The war toppled Britain from her position as the world's greatest trading nation but did not rob her of her traditional grasp of the intricacies of international trade and finance.

Verbal Snipers Answered

The Gallup Poll gathers the opinions of a representative cross section of the people on current public questions. Tests, such as predictions of the results of general elections, have shown that the Poll is a fairly accurate index of public opinion. When asked if they approved

of the removal of price controls, except on rents, at an early date those who were questioned gave an emphatic answer. Sixty-six per cent of them did not approve and said so; seven per cent didn't know what to say and only 27 per cent wanted the controls removed. That should be a sufficient answer to those who have been sniping from behind every bramble bush at Donald Gordon and the price control policies of the Government.

Among the most persistent snipers is a sheet called The Printed Word. Because it is cleverly written it is widely quoted, which is exactly what it is published for. It is put out by a high pressure public relations firm, which means that it is strictly a big interests proposition. Evidently the Government has a better size-up of what the people think of price control than has this and similar would-be moulders of public opinion. Certainly they have made a dismal failure of influencing the people on the matter. The Government and Donald Gordon have lots of headaches in resisting inflation but lack of public support is not one of them. Only a little more than one quarter of the people want to see price controls unceremoniously scrapped.

The Course of Empire

February, 1947, will go down in the annals of what Winston Churchill refuses to call by any other name than the British Empire, for in this month decisions of first importance were taken on India and Palestine. In other times, faced with the situation existing in those countries, Britain would have broken the deadlock with force. It may be that today Britain cannot muster the military and economic force required.

British statesmen learned something from the experience of France between the two wars. That country, bled white by 1918, attempted to meet the demands of her far-flung Empire out of her depleted resources. The effort was more than she could sustain without undue strain. Her weakness and failure in the second war was in no small degree due to her inability to bear her self-imposed external commitments. Far sighted statesmanship requires that undertakings be kept within the limits of economic and military resources. Britain, measuring the effort which will be required to maintain her Empire in the post-war world, is shifting the responsibility for the maintenance of order in two plague spots to those on whom it should rest, on



Two short in the count.

the people of India in one instance and upon UNO in the case of Palestine.

The American press professes to see in these moves the descending curtain of Empire. There are, however, two aspects which are not sufficiently understood in the United States. The British conception of empire has changed profoundly since the Boer War. British rule has become synonymous with tutelage for self-government. Colonies are acquiring an ever-widening measure of control over their own affairs. Dominions have become little more than allies, cemented by the common bond of the crown. A friendly India will be as great an asset as a selfgoverning nation within the Commonwealth, as it is now; a hostile India could be more damaging inside the framework of Empire than if she were entirely free.

The proposed relinquishment of responsibilities is not a surrender but a voluntary retreat to a stronger position. The White Paper on defense, tabled at Westminster last month, shows that Britain does not intend to give up what she secured in the last war. Although industrial recovery obliges her to withdraw 500,000 more men from the armed forces she can still meet her power commitments in the Mediterranean, along the channels of world trade, inside the occupied regions, and such as may be allotted by UNO. Britain's imperial re-alignment, born of conscience, is a reapportionment of present strength to tasks not beyond her capacity.

Low Tide on the Fishing Banks

A new high, or low, in protectionist absurdity has been hung up by American fishermen. These gentlemen of the sea have so depleted the fishing banks off the Atlantic seaboard of their own country that many of them have to go further afield-or asea. They come up to the fishing waters off the Canadian coast. Now fish taken in these same waters by Canadian fishermen seek a market in the United States and so their American sea-faring brothers have applied for an increase of 50 per cent in the tariff on fish. And what do you think is the chief argument they use? It is that they have to go to the waters off the Canadian shore to get their hauls! Of course the fishing is done in international waters but the Canadians, who used to have the fishing there much to themselves, think it would be adding injury to discourtesy to have the duty on their product jacked up 50 per cent.

Desirable Immigrants

While the Government was gradually and cautiously letting the country know what its immigration policy is or is going to be, figures were released which showed that in 1945 all previous records of the arrival of a very desirable type of immigrant were shattered. Births reached an all-time peak of 288,450 in that year. This is good news, if the record of events which ended as the bells heralded the advent of 1946 can be classified as news. Surely it can be said, without incurring the charge of racial intolerance, that the most desirable immigrant this country can receive is a lusty lunged young Canadian. The term Canadian is used advisedly because since the New Year, by virtue of the Canadian Citizenship Act, there is such a legal entity as a Canadian.

To raise and educate these young Canadians is an anxious responsibility. In mercenary terms alone it will cost hundreds of millions. When they grow up, will they proudly retain their Canadian citizenship? Or will thousands of them hit the highway south, as over four million of their predecessors have already done? That will depend on what kind of a Canada they will reach maturity in. The responsibility of raising and educating them devolves largely upon their parents. To make this country such a desirable place to live and work in that they will want to live and work in it is the responsibility of every one of us.

Underthe

PEACE TOWER

Just about the last place where you can play a good old-fashioned game of politics here in Ottawa, is with redistribution. This session for the first time in almost fifteen years, parliament is going to re-scramble the country's political boundaries. But to the usual humors and headaches of redistribution, we are inserting two extra ones this time. First we are adding ten more seats to the House. Second, we are three years and one election late, thanks to the war.

Ordinarily, we re-align the political boundaries of Canada every ten years, choosing a session of parliament following the decennial census. The war delayed things, and instead of proceeding with redistribution way back in 1944, as originally planned, we went ahead and had the 1945 election based on the redistribution following the census of 1931.

But the confusion in the minds of many really comes from our new plan to expand the House of Commons. In place of 245 M.Ps., as we have now, we are to get 255 in the new parliament. We also have a new system of computing membership. In the past, we took the population of Quebec, divided it by 65, and the answer we got was our unit of parliamentary representation. After the 1931 redistribution, for instance, the "quotient," as it is called here, was 44,186.

Quebec always had 65 members, no more and no less. They decided they would do better under a new system, and insisted they be allowed to have M.Ps. on a population basis. Thus they will get 73 members next time, a gain of eight over what they have had in parliament since Confederation. The new quotient is 45,578. That is to say, every time there are 45,578 people to be found in an area, they are entitled to one member of parliament. This is not exactly the way it works out, for rural ridings often have far less people than that, while cities frequently have many more. In a word, the country is over-represented at Ottawa, the city, under-represented.

The Liberals here naturally are itching to get back at the Tories for what they did in 1933. That there have been some foolish gerrymanders, no one doubts. But that the Liberals will do much better still has to be proved. Usually, however, a gerrymander proves to be a boomerang, returning to knock out the party that tossed it. But you do hear some Progressive Conservatives assuming a lofty tone, saying that this redistribution should be taken out of politics, turned over to an impartial judicial commission. The Liberal response is, why didn't Bennett do that in the 1930's, when he was in power?

BUT hard-boiled and realistic Progressive Conservatives feel they can do better with the Liberals than with some judges. They have told this writer that they feel they can do better "with the devil we know, than the devil we don't know." The so-called bad man in this case for Manitoba will be the mild and pleasant Gilbert Weir, Liberal Whip and Manitoba potentate. Conservatives find him a pretty reasonable fellow, and believe, deep down in their hearts, that they can accomplish more by horse-trading with Gib Weir than trying to shout down some unsympathetic and non-comprehending judge. The reason I bring in Gib Weir is that he offers me the perfect example of a Tory preferring to do business with a Grit, than with a judge. As between the bench and Gib Weir, they'll take

Now then, to get down to cases, what's doing

in Manitoba? Years ago, Neepawa was slated to go, to be gobbled up by the surrounding ridings. But with John Bracken, Progressive Conservative leader, holding the seat now, they dare not do this. Instead, there are two other possibilities. One is that Gib Weir's own seat, Macdonald, will dis-

be swallowed up very nicely by uencies, and Gib could be swallnicely in the Senate. Another, nore militant Liberals, is to toss

appear. It could be swallowed up very nicely by the other constituencies, and Gib could be swallowed up very nicely in the Senate. Another, fancied by the more militant Liberals, is to toss Souris and Art Ross to the wolves. Souris, they point out, has the lightest population of any riding in Manitoba. It could be absorbed by Brandon and Marquette, to mention two. Maybe Lisgar could get a slice. But the objection to carving up the Conservative riding of Souris is that it is both in a corner, and on two borders, and it would make an awful mess. It can only be handled from east and north, since neither North Dakota nor Saskatchewan figure in any moves. Souris, you can take it, offers problems.

But Manitoba has to come down from 17 seats to 16, and with Winnipeg growing, and southwest Manitoba failing to progress as rapidly in population, a goat must be found. Liberals say it will be Souris; Conservatives hope it will be Macdonald. The C.C.F. are lying low and watching.

Over in Saskatchewan, one riding has got to go. At first, there was some monkey business started about Lake Centre, which is the bailliwick of John Diefenbaker, brilliant parliamentarian, and only Progressive Conservative from Saskatchewan. But the feeling was that if the Liberals dissolved this seat, then Diefenbaker would become a martyr, and would make the most of it. What they may try to do however, is to unload some sure Liberal votes onto him, to make it tougher for him to get back to Ottawa again. (Conservatives here assure me that if Saskatchewan ever turns John Diefenbaker down, there are other good ridings where the people are eager and willing to have him.)

Where the redistribution is likely to take place in Saskatchewan is where it will hurt M. J. Coldwell. The southerly ridings in the centre prairie province are in an area where population is not heavy. Nor can anybody foresee south Saskatchewan filling up rapidly. The filling up is toward the wooded north. So Assiniboia, Weyburn, and Wood Mountain are likely to be converted from three to two. There is talk of involving Swift Current and Maple Creek, too, and thus, of the southern five, reducing them to three. This would give the Liberal party one to play with elsewhere, and they might try to re-

align the borders so they could get a spot where Jimmy Gardiner and Co. figure they might have a chance, next election day.

Another thing that is being planned in Saskatchewan is to move sure

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[Photo by H. Armstrong Robert

HE last few years have brought the most spectacular changes in American agriculture ever seen in a like period-changes in marketing methods, changes in production practices, in crop varieties, yields, prices, equipment, and changes in market demands.

One of the results of all these changes is an agricultural plant which produces far more in total and is geared to the economy of a period in which the demand for farm products was never fully satisfied. Now we have ahead of us the twin problems of maintaining profitable outlets for the expanded capacity of our agricultural plant, and of adjusting the output of that plant to the demands of a peacetime economy.

In considering these changes we are looking ahead now to our long-time future, not just to a short-time accomplishment as we did during the war. The last report of the Crop Reporting Board on acreage and condition of winter wheat indicates another new record wheat crop next summer, an increase of more than seventy million bushels in winter wheat alone over last year's all-time record.

We might raise the question now as to whether that will be an unmixed blessing for farmers and for the rest of us. If we don't get all the transportation we need to move grain for export, we are going to have more grain available this year than we can use. How much will the world need or find it possible to take from the next wheat crop? Will it be practical to wring every possible bit of production out of the land in the years ahead?

We have been using only a little more land in recent years than before the war, but we have been cropping that land much more intensively, raising crops that put a heavy drain on soil fertility during more years of the rotation, and using grass and legumes for a shorter period in the rotation.

It is time to raise questions about how intensively we should use the farm plant for the best long-time results. Farmers are the custodians of our agricultural resources. And the way they handle that responsibility is of direct interest to everyone. What do we as a nation need to do to insure the continuous wealth of those resources? Have we made enough effort toward putting the nation's farm land to the

DURING the war we borrowed from the fertility stored up in millions of acres through conservation efforts of the 1930's. That borrowing is like a note at the bank—it has to be paid back to keep our future solvent. With the passing of the emergency food demands we shall have opportunity to make more extensive use of the soil conservation knowledge we have gained. We should treat that opportunity as a necessity. Soil conservation must be a major consideration in making the best use of our agricultural

Despite the need for better diets for many of the

Clinton P. Anderson, Ameri-

can Secretary of Agriculture,

answers the question "How will the United States keep

profitably employed the huge

farm plant built up during the

people in this country, despite the emergency need for supplying food to other lands, we have learned that the practical maximum production, for some farm products, at least, can easily be surpassed. We have learned that lesson in the case of potatoes. When we produce more than we can eat of a crop that we cannot economically store, we waste our manpower, our soil resources and the food itself. That's why we in the

Department of Agriculture arc taking steps to help farmers relate their potato acreage more realistically to market prospects in 1947.

While we recognize that the practical capacity of our farm plant in the long run may be somewhat smaller than was practical for the war period, we must not forget that our production potential is far greater now than before the war. The top limits on production capacity are constantly going up as we improve our methods, our crops, our livestock, and our farm

It is hard to visualize the nation's agricultural plant because it is so big and so diverse. Perhaps we can see it better if we think of it for a moment as one farm, if we think of it as operated by one farmer. That farmer, with average weather this year, can be expected to produce more than a fourth more products to sell than in the years just before the war.

With weather averaging as good as last year, he will produce a lot more than that. He has only a little more crop land than before the war, only about one hundred and three acres for every hundred before the war, but he is using more of it for intertilled crops and less of it for grass and legumes. He doesn't have as much help as he had before the war,

but he and his workers are more efficient because he has more machinery, and because he is using eightyfive per cent more fertilizer and three times as much lime, because he is using better crop varieties, controlling insects better, and feeding his livestock better. He is still producing most commodities at about the same rate as at the end of the war. He knows that his markets are changing and that there are more changes

ahead. He knows he will have to change his production pattern to meet the changing demands.

But the farmer can't just throw a switch and stop the production line. There are many things he can't change. He can't throw away his improved machin-

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Will B.C. Acquire A New Leader?

Speculation rife on the political future of Premier Hart

By CHAS. L. SHAW

WO new senators from British Columbia were appointed recently-S. S. McKeen, the Vancouver tugboat man, and J. Gray Turgeon, for many years in politics, but there's still one vacancy that will presumably be filled one of these days from the ranks of British Columbia prospects. Perhaps that one remaining vacancy is significant.

The story in west coast political circles is that the seat is being held in reserve for Premier John Hart when and if he wishes to occupy it. The story is getting to be a rather old one now. but it still lacks the confirmation that only two men presumably could supply -Prime Minister Mackenzie King and Mr. Hart, and they are saying nothing. No man is a better hand at keeping a secret, especially when it concerns himself, than Mr. Hart. Despite his friendliness and readiness to talk with almost anyone on almost any subject, Mr. Hart is a positive genius in evading a categorical reply to questions concerning his political future.

One of these days, of course, Mr. Hart will probably step out of the premiership, and speculation has already been going on regarding his successor. There are few standouts for party leadership these days. It was different, the old-timers will tell you, when stalwarts like "Honest John" Oliver, Sir Richard McBride, Billy Bowser and T. Duff Pattullo were stalking the political woods. But right in the present cabinet there is undeniable premiership calibre. The question is to find someone, however, who would please everyone and maintain harmony. Finance Minister Herbert Anscomb has the qualities of leadership, all right, but his critics say he is too steeped in oldline Torvism. George Pearson has been an able administrator, but he has his detractors, too, who say he has consistently leaned too much toward labor and socialism.

F the new premier is chosen from within the cabinet, there are so-called experts who will bet that the choice will fall on E. T. Kenney, whose stature has steadily risen since his appointment as minister of lands and forests, and he possesses the qualifications that might make him strong with a large section of the electorate—he's not a "big city" man. Terrace was his home before he went to Victoria to join the cabinet, and Terrace, in case you never heard of it, is a very small place and many, many miles from a metropolitan centre. Kenney's choice would no doubt be popular with those who have been repeatedly charging that the province is run by big-town politicians.

If, on the other hand, someone from outside the government altogether is picked for the job, the field is wide open. One of the suggestions has been Chief Justice Gordon Sloan, who used to be attorney-general and who is still in his 40's—one of the province's very bright young men. But there is no indication that the chief justice would be interested in returning to the hurlyburly of politics.

When Mr. Hart delivered his policy speech in the legislature recently he again sounded the note of co-operation between Ottawa and British Columbia, partly no doubt because he has learned that such co-operation pays off handsomely. Only a provincial leader who commanded the respect of Ottawa could have made such a handsome financial deal.

Now Mr. Hart is reaching out for co-operation in a different field. He is asking Ottawa to go into partnership with the province and the two transcontinental railroads in a program for

the extension of the Pacific Great Eastern Railway into the Peace River country. It is estimated that the job will cost about \$32,000,000, which is more than the provincial government, which owns the P.G.E., would like to pay all by itself, especially when it is considered that such a rail extension would no doubt prove profitable to the two big railroads and the nation as a

Mr. Hart said that he was prepared to go to Ottawa at any time to bring about a solution to problems of social security and public investment, to establish a high level of employment, and that the tax agreement he had negotiated with Ottawa measured up to all the requirements he had demanded.

For those who think that Mr. Hart has his eyes on Ottawa there was probably more significance in his announcement that his coalition government had implemented every one of the 43 points outlined in the coalition manifesto with which he swept to victory at the polls a year and a half ago. They might have imagined, for instance, that the premier was intimating that his job was done.

There can be no debate about the fact that British Columbia has made long strides during the coalition regime. Industry has been active and production has climbed to new heights. Population has swept across the million mark at a time when some of the other western provinces were registering declines.

As an indication of the way business has been moving to B.C. there is the fact that 1,518 new companies with a capitalization of almost \$100,000,000 were incorporated in the province last year. Five hundred and forty-seven of those companies were in the industrial field and they represented a capitalization of \$63,000,000.

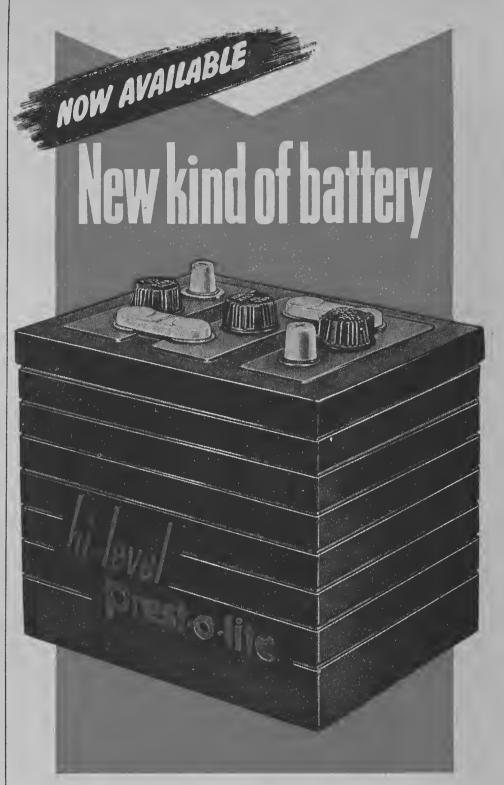
Farming has prospered in British Columbia during the war years and it continues to prosper today. The apple crop broke all records in the Okanagan Valley last season and the total number of trees bearing fruit there has been doubled in the past decade.

it was interesting to note that in her refrigerator space she carried 7,500 boxes of Okanagan apples.

T'S still too early for a detailed discussion of the legislation planned this year affecting farmers. However, considerable opposition has arisen to the proposed bill to give agrologists professional status. The Farmers' Institutes met in Victoria recently and turned thumbs down on the plan.

James Woodburn, of Salmon Arm, chairman of the institute, remarked that men and women who had learned agrology the hard way would be penalized because of lack of "book learning." The field would be the exclusive preserve of university graduates.

There has been general approval of the government's land clearing program, but the two-year limit on payment has evidently proved a hardship to owners of small farms who are trying to get started. It is estimated that it costs about \$610 an acre from the time clearing is commenced until any return is made from the land, and some farmers are asking that the down payment on land clearing be reduced from one-third to 10 per cent and that the second payment be 10 per cent so that some returns could be realized before the bulk of the cash has to be



Markets for the province's farm produce are being gradually extended, and when a Vancouver-built motorship of 7,500 tons made her first trip from B.C. a few days ago for the West Indies it was interesting to make that in her

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NEWS OF AGRICULTURE



[Wheeler Newspaper Syndicate photo.]

Part of the 100,000,000-bushel potato surplus in the United States for which no market was found either at home or abroad. Supporting U. S. potato prices under the parity formula cost the government \$80,000,000.

Potato Bread Like Mother Made

A SUCCESSFUL Michigan baker, who in 15 years has built up a five million dollar annual bakery business, claims that the 100 million bushel surplus potato crop in the United States could be used up and more wheat released for hungry Europeans if four per cent of bread flour consisted of potato flour or potato culture. This would mean, he said, the use of 20 pounds of whole potatoes to every 100 pounds of flour.

Schafer, who operates the Peter Pan Bakeries and the Schafer Food Products Company, manufactures potato culture by a secret formula designed to imitate the mashed potatoes or potato water used years ago by our mothers and grandmothers. Bread made from this potato culture, he calls "Culturized" potato bread, for which he has received an award of merit from the Seibel Institute in Chicago, a testing laboratory for baking products. They reported that his potato bread has a different flavor and remained fresh for days longer, because potato bread is more resistant to dryness and to

International Wheat Agreement

A CANADIAN party of nine persons, including six official Canadian delegates, will attend the International Wheat Conference opening March 18 in London, England. The purpose of the Conference will be to make an attempt at harmony in wheat marketing between the world's important wheat-exporting countries and the important wheat-consuming countries, of which Britain is the outstanding member.

The International Conference cannot, of course, arrive at any final decision, nor is it expected to reach a firm and complete basis of understanding. An international commodity agreement, however, requires an immense amount of preliminary work and negotiation, so that to the greatest possible extent all interested parties may be satisfied that their individual interests have been fairly taken into account.

It will be recalled that an international wheat agreement was reached during the thirties, and an attempt was made to put it into effect. Its operation, however, fell down, chiefly because of the failure of Argentina to respect the obligations put on her by the agreement. The result has been that no international wheat agreement has been in effect at any time, except for

this first abortive attempt. During the course of the war, however, an agreement was worked out in Washington between Canada, the United States, the United Kingdom and Australia, which, it was agreed, should be pigeon-holed for the time being, until a more opportune moment should arrive for its operation. In 1946, the agreement was pulled out of the pigeon-hole and late in the year the proposition was gone over at a meeting held in Washington, attended by Canadian representatives. Out of this Washington meeting came the proposal to hold an international wheat conference in London this month.

In this connection, the Canadian Federation of Agriculture, at its recent annual meeting in Winnipeg, passed the following resolution: "Resolved that the Canadian Federation of Agriculture should repeat its former recommendation that the Government should endeavor to: (a) Secure from wheat importing countries assurances against restraint, in the future, of international wheat trade; (b) obtain assurance of practical measures designed to maintain a reasonable minimum level of wheat prices in international trade, in return for which this country might reasonably agree to measures designed to prevent prices becoming unduly high during period of scarcity; (c) to bring about a system of international wheat marketing through an international wheat agreement to be signed by both importing and exporting countries; and to be based on such principles, which would be regarded by producers as superior to the system which has prevailed in the past and which has resulted in very wide price fluctuations."

Australian Wheat Stabilization Bill CANADA is not the only country which has attempted to stabilize the business of producing wheat. In Australia the Federal Government has passed a bill to stabilize the Australian wheat industry, which requires complementary legislation from the State parliaments before it becomes law.

The proposed law will stabilize the price paid by consumers in Australia and at the same time offer a guaranteed minimum price to the grower, regardless of world supply and demand. This price to the grower is approximately 83 cents per bushel, and since world prices are much over this figure, a wheat stabilization fund will be set up so that in the event of a slump in wheat prices, growers will receive additional



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payment up to 5/2, Australian (83 cents).

Wheat sold overseas above 5/2 per bushel, but not exceeding 9/6, will contribute to the stabilization fund half of the difference between the guaranteed minimum and the price received. If more than 9/6 is received for export wheat, the grower will receive everything above 9/6. The Bill will operate for four more years and will also cover the last market year.

Deflation Coming?

SOME signs are gradually accumulating which ing which appear to bear out the anticipated moderate depression in the United States which is expected to materialize before the end of 1947. In such a depression, farm prices, or, more correctly speaking food prices, fall first; and already butter prices are reported to have sunk 30 cents per pound from the high point reached last fall. Furs and other luxury items have dropped sharply in price, but economists point out that some prices will continue to rise, even after the turn has set in.

Press dispatches in February indicated that the average price of all hogs sold on the Union Stockyards, Chicago, was the highest in history at \$26.50 per hundredweight, and the top price of \$27.50 for hogs weighing from 150 to 260 pounds smashed the all-time record set October 15, 1946. Prices in February, 1946, were \$14.85 for live hogs. Present high prices, however, are largely in anticipation of a small run during the balance of the year, since it has been estimated that 80 per cent of the 1946 spring pig crop has now been marketed.

Competition between the United States Government and the milling industries for wheat brought cash wheat in Chicago to the highest point in 27 years on February 8, when it sold for \$2.25 per bushel. March futures were 2.20% and the March future in Kansas City traded at \$2.12 % on the same date.

The United States price support law requires the U.S. Department of Agriculture to support wheat prices at 90 per cent of parity until December 31, 1948. Parity based on the 1909-14 period is now \$1.90 per bushel. As a result of Government buying plus parity, July and September wheat advanced in price over \$100 million in the U.S. in three weeks' time.

N. Z. Butter to Offset Dairy Shortage

THE shortage of dairy products in Canada, including fluid milk, butter and cheese, has been primarily due to the special effort made to supply dairy products to Britain. It is not so generally realized that it is also due in part to a much higher consumption in Canada of dairy products. This increased consumption is illustrated, for example, by the report of the Saskatchewan Milk Control Board, which reported that for the year 1946, milk production in Saskatchewan increased by 3,200,000 quarts, but that Saskatoon had increased milk sales by 16 per cent, Prince Albert by 13 per cent, Moose Jaw 12 per cent and Regina 10 per cent. Consumption of milk during 1946 was nearly double consumption at the beginning of the war. Sales of whole milk were 92 per cent greater last year than in 1939, and fluid milk and cream products had increased 70 per

The scarcity of dairy products has also been due to some extent to the disposal of dairy herds by farmers who have reached retiring age, or who decided that increased costs and ceiling prices did not go well enough together. In any case, butter production has suffered to the point where the Government was faced with the necessity of falling down still further on British contracts, or importing butter from outside Canada to make up the shortage

and avoid cutting the butter ration still further. It was decided to import butter from New Zealand, and an arrangement was made between Canada, New Zealand and the United Kingdom whereby 12 million pounds of butter, might, if necessary, be diverted from the United Kingdom to Canada.

About 1,500,000 pounds of New Zealand butter reached Canada early in February, and a further amount up to a total of five million pounds will be imported. Honorable James G. Gardiner, Minister of Agriculture said:

"We can get 12 million pounds of butter from New Zealand and Australia this year if we need it, to maintain our present ration, but providing there is no such drop in our own butter production compared with previous years, I believe that five million pounds will be all that we require."

A butter shortage in Canada led to the raising once more of the oleo question, and Senator W. D. Euler sponsored a proposal that oleo should be distributed in this country, but the proposal received a scant consideration.

In the United States oleomargerine is sold under various systems of taxing and licensing. Each state has excise taxes ranging from five to 15 cents per pound. Nine states impose manufacturers license fees, 13 states have wholesalers fees, 23 states prohibit the sale of colored margerine, and 34 restrict the use of margerine in hotels, restaurants, bakeries, confectionaries and boarding houses.

Recently, the margerine industry won a court victory in Pennsylvania, when a State Supreme Court upheld a decision of a county court declaring invalid state license fees imposed on wholesalers and retailers selling margerine. The high court declared the margerine fees unreasonable, confiscatory and discriminatory.

Alberta Sugar Production

CANADA'S domestic sugar production from sugar beets is to be boosted this year as an aid in overcoming the sugar shortage. In 1946, farmers in southern Alberta delivered 387,296 tons of beets to the two plants at Raymond and Picture Butte. Between them, these two plants sliced 2,923 tons of beets for 24 hours daily, for a period of 126 days.

Beet harvesting was very difficult in the fall of 1946, owing to weather conditions and excessive mud. About 8,000 tons were estimated to be still in the ground at the end of the processing period. Total output of the two plants is reported to be 106,187,500 pounds of sugar from beets averaging 16.65 per cent sugar content.

Farmers International Organization

THE first general meeting of the Inter-I national Federation of Agricultural Producers, which was formed at a meeting in London last year, will take place in Holland from May 12-23 at Schedeningen, near The Hague. Canada is one of 13 member countries of the recently formed international organization of farmers, and it is expected that a strong Canadian delegation will attend this international gathering.

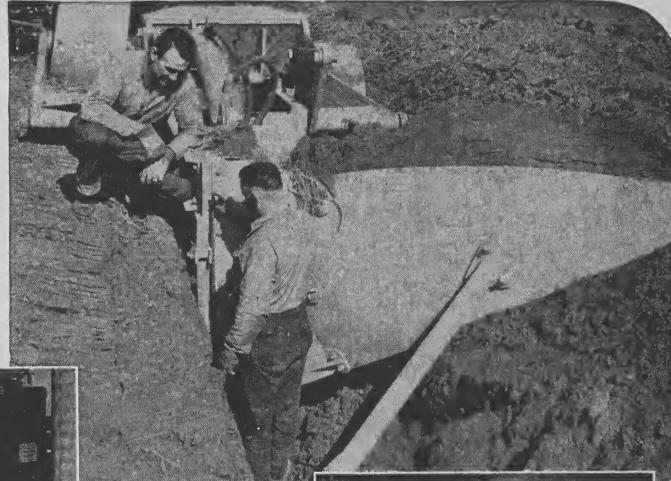
James Turner, president of the National Farmers' Union of England and Wales, is president of the I.F.A.P. The 13 member countries are: Australia, Belgium, Canada, Denmark, France, India, Luxembourg, the Netherlands, New Zealand, Norway, Southern Rhodesia, the United Kingdom and the United States. It has been announced from London that other countries are likely to be accepted as members at the meeting in Holland, including China, Finland, Hungary, Palestine, and Sweden. In addition to member, or prospective-member countries, several other countries are likely to be represented at the meeting and may be responsible for further applications for membership.

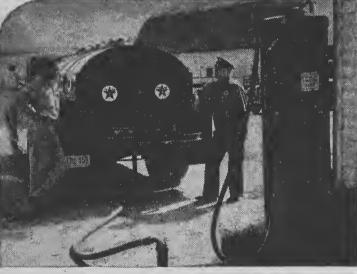
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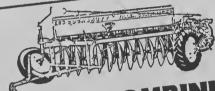


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BRANTFORD

Plant Exploring in Northern B.C.

F. L. Skinner scouts the country around Fort St. James and Vanderhoof for plants that may be useful on the prairies



The Nechaco River near Prince George, with part of the herd of W. Coulter, president of the Prince George Agricultural Society.

OR several years I have been planning to visit the colder and drier districts of north central British Columbia with a view of seeing something of their horticultural possibilities and of collecting some of the more interesting native plants for trial in Manitoba. The Douglas fir was one of the the trees native of this region and I was particularly anxious to see it in its north and northeastern limits and to collect these geographical forms for trial in Manitoba.

So in November, 1945, when Frank Hutton became Superintendent of the Dominion Experimental Station at Prince George, I arranged to visit him at the earliest time that would be mutually convenient. This time arrived last August and I was able to spend from August 20 to 24 inclusive at Prince George. During that time we managed to cover quite a bit of territory from about 35 miles south of Prince George to 20 miles north and as far west as Vanderhoof and Fort St. James on Stuart Lake. We also had an excellent opportunity of seeing the horticultural products of the district while assisting in judging at the annual Fair held by the Prince George Agricultural Society on August 23.

On the morning of the 20th we set out to see the seedling apples at the Bowyer farm which is about 20 miles north of Prince George. The first sixteen miles was on the Summit Highway, a good gravel road that will eventually go right through to the Peace River. Just before leaving the highway to take the road to the Bowyers', we passed the Johnston farm situated on a beautiful stretch of farming land that reminded me very much of the country south and west of Grandview. The Johnstons go in heavily for Alsike clover and were busily engaged in threshing over 200 acres of it at that time. I was told they planned to have over 400 acres of this crop next year.

SHORTLY after leaving the highway we got stuck in a mud hole and had to walk the rest of the way; this gave us a good chance to see the native vegetation. At one time this country had apparently been completely covered with forest composed of Douglas fir, spruce and Lodgepole pine with a sprinkling of balsam, birch and aspen poplar. Fires during the past 40 years had, however, reduced the mature stands of fir, spruce and pine to isolated pockets and where the land had not been cleared for farming there was now a thick stand of trees up to about eight inches in diameter composed principally of aspen poplar with a sprinkling of pine, balsam and birch. The shrubs bordering the roadway were much the same as those we have in northern Manitoba such as willows, chokecherries, saskatoons, dogwood,

roses, red elder and snowberries. Instead of the white flowered Spiraea of Manitoba, however, there was Spiraea Menzesii with flowers varying from pink to deep rose, and in one damp spot we saw the prickly Devil's Club. Quite near the Bowyer farm we found some dwarf blueberries growing among wild roses, saskatoons, and snowberries which seems to indicate that they might grow in ordinary garden soil. This is probably the dwarf bilberry (Vaccinium

The general aspect of the country together with the nature of the plant growth reminds me very much of the north and west flanks of the Riding Mountains as they were when settlement started about 30 to 35 years ago.

On the 21st we spent a short time looking over the newly planted test orchards at the Experimental Station and also the nursery plots. There is very little wind in this part of the country. Mr. Hutton tells me that the snow never drifts here and only super-optomists ever buy wind chargers. There were no shelterbelts, which seems very strange to one accustomed to prairie horticulture.

IN the afternoon we visited several farms in the Fraser Valley where fruit growing was being tried. At one farm several miles north of town quite a collection of crab apples and plums of the varieties usually planted on the prairies had been planted. The crab apples looked quite healthy and were bearing well but the plums did not look as happy as they usually do on the prairies. Here also we saw a hedgerow of blackberries that, though they showed some evidence of winter injury, were carrying a good load of fruit. A cross between this variety and the creeping blackberry from the valley of the upper Ottawa River (which promises to be hardy at Dropmore) might extend the range of this fruit.

We then visited W. Coulter whose farm lies in the Nechaco River valley just outside Prince George; besides carrying on a modern dairy farm with a herd of registered Ayrshire cattle, both Mr. and Mrs. Coulter are interested in gardening. Mr. Coulter is a Scotsman, which is probably the reason why he favors the Ayrshires. Here also we found that apples were doing much better than plums though some of the new Manchurian plums were doing better than the older varieties.

On Thursday, the 22nd, we went out to see some fruit plantations about 35 miles to the south of Prince George and did some scouting around among the native plants on our way back. At the Kolling farm we saw a planting of Hibernal apples that had been bearing for some years, though owing to late spring frosts there was no fruit on them this year. The trees looked quite vigorous but on several of them there were fungus growths where limbs had been removed. I took this as an indication that the Hibernal apple was not as well suited to the soil and climate as were the Bowyer apples.

ON our way home we ran across an interesting native evergreen shrub, Pachystima myrsinites. This is related to the bittersweet, but only grows from 12 to 18 inches high; the sprays of box-like leaves are used a great deal by prairie florists for wreaths and other floral decorations. This is apparently near the northern limit of this interesting shrub and it may prove hardy in Manitoba. A near relative from the mountains of Virginia (Pachystima canbyi) gives promise of being hardy at Morden, having come safely through the past two winters.

Friday the 23rd was spent at the Agricultural Show and judging the horticultural entries gave us a good chance to see what this district could produce in the way of vegetables and flowers. In corn and tomatoes the Prince George region is in about the same position as northern Manitoba was 30 years ago. Varieties better suited to the soil and climate will have to be produced or different cultural methods used if this district is to grow its own corn and tomatoes. In the leafy vegetables such as cabbage, lettuce, cauliflower and kale I have never seen finer specimens. The flowers also were very good, especially the sweet peas and stocks, the latter being the best I have seen in Canada.

At the Show we met H. Cresswell of Montreal and T. O. F. Herzer of Winnipeg and it was arranged that Mr. Hutton and I would join their party on Saturday on a visit to Vanderhoof to see scrub being cut and piled by a bulldozer and also to visit the historic Fort St. James on Stuart Lake.

After leaving the Fraser River valley the road to Vanderhoof and Fort St. James runs through rolling treeclad country much like that along the Summit Highway; for the first 15 miles or so there is quite a bit of it under cultivation, but from there on there is little sign of settlement to be seen until within a few miles of Vanderhoof. Most of the timber is poplar with a sprinkling of birch and conifers and that has grown up within the past 30 or 40 years, though at one point about 40 miles from Prince George there was a nice stand of Douglas fir surrounding a beautiful little lake lying in a deep hollow just off the highway.

Vanderhoof with its grain elevators, implement agencies and lumber yards looks very much like any country town in northern Manitoba or Saskatchewan. We went right on through to a point about seven miles out where the bulldozer was at work piling scrub. At this particular place the cut over land had been a swale thickly covered with willows from 10 to 20 feet with a few poplars and pine mixed through it. A depth of about a foot of leaf mould and the flexible nature of the willows made it difficult to cut everything

clean; however the owner of the land was well pleased and said it was costing him about \$15 per acre to have the scrub cut and piled. From there we went over to see a job that had just recently been completed; this was on drier soil and carried a heavy growth of poplar and a few pines. The trees would run up to six inches in diameter and to 40 feet in height. A very clean job of cutting had been made at a cost of about \$10 per acre for cutting and piling. This was only a small fraction of what it would have cost to do such work by hand.

Fort St. James on Stuart Lake is 42 miles by road from Vanderhoof and in the days when British Columbia was known as New Caledonia this was the centre of administration.

On the way between Vanderhoof and Fort St. James we saw a good illustration of the fact that good farming pays even in this virgin soil. Near the highway there were two good sized fields lying together with only a fence between. One field had a crop of wheat that looked good for over 35 bushels per acre while its neighbor would do well to yield 15.

THE Fort stands on a piece of level grassy land about 40 feet above water level at the southeast end of the lake. Many of the old log buildings are still in good order and apparently still in use. There are also quite a few buildings of modern frame construction. One home we saw had a garden enclosed by caragana and Manitoba maples.

The Douglas fir is said to extend this far north but I saw no sign of it in the short time at our disposal. I did, however, see one bush of a rose that agrees with the figure of Rosa nutkana in Miss Willmott's "Genus Rosa"; this is a rose native of the Pacific Coast that goes as far north as Alaska and has been used recently to some extent by rose breeders.

Poplars and spruce were the only trees I saw and the willows, cherries and other undergrowth were the same as that usually seen in northern Manitoba

This whole country north and west of Prince George (as far as I saw it) reminds me very much of the Riding and Duck mountain country as it was when settlement first started. With modern heavy machinery the clearing of much of it should be economically feasible and much less of a back breaking job than was the clearing of our bush lands in northern Manitoba. In some places the soil shows definite signs of acidity which may present special problems in the handling of it. However, the Dominion Experimental Station at Prince George, under the leadership of Mr. Hutton, will, I feel sure, help to solve many of both the agricultural and horticultural problems of this district.

One of the commonest roadside weeds of this whole district is Alsike clover and I think that this fact is an assurance that some day this section of western Canada will flow with milk and honey.

Does Tree Planting Pay?

For over 30 years The Guide has encouraged the planting of shelter belts around farm steadings. In the early half of that period the response was good. Many fine plantations were started. The dry years of the 30's, followed by the war time demands on limited farm labor resources have worked against a continuation of this policy. Are there other reasons? Has the practical experience of farm people lessened their appreciation of farm shelter belts?

Now, after the severe blizzards of the past winter, is a proper time to make a re-appraisal of the value of farm shelter belts. The Guide would like to know from farm people how they feel about it. Has the labor investment represented in their windbreaks paid dividends? Letters should be short. The shorter the better, with a top limit of 600 words. Address letters to The Editor, The Country Guide, 290 Vaughan Street, Winnipeg, Man.



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Winnipeg's annual sporting event has earned a reputation no less world-wide than Calgary's stampede

By WALTER H. RANDALL

HE 59th Winnipeg Bonspiel has run its uproarious course. Ten thousand tons of granite have gone sliding down the ice lanes of Winnipeg's fourteen curling clubs. Four hundred rinks comprising 1,600 curlers have laid aside their competition brooms happy to be finished with the strenuous grind. For in the course of a competition on this scale the individual curler will walk 140 miles, 65 miles of which will be at the dog trot sweeping, often furiously. In his nine days of effort, broken by one Sunday, he will have lifted $6\frac{1}{2}$ tons of granite -more if he happens to be a member of one of the crack rinks which stay in till the last dog is hung.

Manitoba's fame as a curler's paradise is known from Scotland to Nova Scotia, from McKenzie Island to Minnesota, and in every other corner of the globe. Servicemen returning to Manitoba have heard the Winnipeg 'spiel mentioned in Australia, New Zealand, North China, France, Switzerland and Sweden! For everywhere it is acknowledged to be the largest sporting event of its kind in the world.

Competing with the hundreds of rinks from local clubs and country points in the province there were foursomes from North Dakota, Minnesota, Saskatchewan, and Northern Ontario. At other 'spiels Albertan and British Columbians have frequently come to test their luck. The 1947 'spiel had 15 major competitions with 334 prize donors. In the 59 years of its history since the first Winnipeg meet 48 trophies have been donated for annual competition. Formerly medals were awarded prizewinners, with the occasional watch slipping into the prize list. But the ladies, bless them, who now have a 'spiel of their own running concurrently that draws 100 city and country rinks, were the cause of changing the prizes from medals to more useful articles.

Speculation on the origin of the "Roarin' Game" can get you an argument or bets pro and con in any curling clubroom. Whether a nameless benefactor took the rough beginnings of curling from Scandinavia to Scotland in the dim long ago, as some authorities believe, or whether a wee Scottish laddie started it all by heaving rocks down some frozen loch, as other historians firmly proclaim, no one can rightly say.

But the hardy Scots who came to Canada a hundred years ago brought the game of curling with them. Canada's first club was formed in Montreal in 1841. Manitobans began curling on the Red River in 1874, and on December 7, 1876, the West's first organized curling club came into being. It was called the Manitoba Club, and Indians gazed with amazement at the strange goings-on of the white men who sent round rocks curving down the ice while others swept or roared as the occasion demanded.

I/HAT is the strange power the Manitoba Bonspiel has to attract curlers from every walk of life and from almost every province in Canada and from as far south as Wisconsin in the United States?

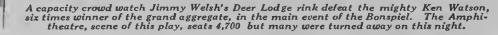
No one can deny that there are such disadvantages as loss of working time, no little financial expense what with entry fees, travelling and living expenses and considerable physical wear and tear. Every curler knows what it is like to go extra ends in a closely contested game on one draw, then after losing by an inch or so perhaps, tumble outside into 20 below zero weather to wrestle with a cold car, get it started, then rush across the city to another rink to play on the next draw!

Yet, every year, as surely as February, the favorite month of curlers, looms on the calendar, you begin to notice a strange stir in the streets of Winnipeg. Hotel rotundas swarm like ant hills with men who vary in size and looks, but who have the common accoutrements of a well-used broom, a bright sweater, a beaming smile and glad handshake for everyone within

Talk is of brooms and ice, heavy or slow, swingy or keen, third men and leads. There is the thrill of scanning the large draw sheets in the "ice room," commonly used name for curling headquarters. There is the hopeful anticipation of a good run on opening day and the possibility, sometimes realized, of knocking over one of the 'Spiel's bigname rinks.

Curling is a sociable game. It seems to bring out the best in a man. A magistrate rubs shoulders with a chap he







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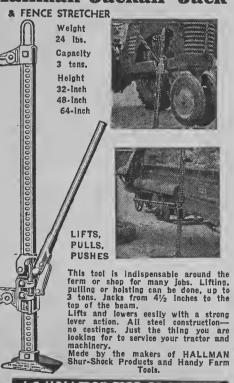
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fined for speeding a few days previously; political opponents play on opposite rinks and a minister will find himself playing against a husky who drives a beer truck.

Wherever the curlers gather you will hear talk of iron rocks and granite rocks. Iron rocks are used in Quebec, but elsewhere the granite, as first used in Scotland and perfected in Canada, has become the standard rock.

Incidentally, in Manitoba Bonspiel play, rinks do not play with their own rocks. Up until 1938 rocks were moved from rink to rink, but since then M.C.A. officials have followed the custom of placing two sets of rocks on every one of Winnipeg's 73 ice sheets and this system has worked very well ever since.

In the old days no sooner had the draw been made and play commenced than along would come what came to be called the "bonspiel thaw." Dejected curlers, immersed from noggin to knees in wool and from the knees down with rubbers, gazed dejectedly at sheets of ice covered with inches of water.

A really good thaw can still play havoc with the draw, but since 1938 all semi-finals and finals have been played on artificial ice at the Amphitheatre and use of artificial ice by city rinks is coming within a few years!

Fraternizing of curlers east and west with the resulting better understanding of common aims and problems was the paramount idea behind presentation of the Macdonald Brier Tankard, now called the British Consols Trophy, for inter-provincial competition.

The Tankard was presented to the Manitoba Curling Association in 1925 for annual competition and in 1925 and 1926 the rinks winning the trophy were taken east on a goodwill tour as guests of the Macdonald Tobacco Company. These missionary visits of Howard Wood's Winnipeg rink, George Sherwood's Winnipeg rink and Ossie Barkwell's four from Yellow Grass, Saskatchewan, set the stone rolling for a Dominion-wide event.

WESTERN rinks have dominated British Consols play since the competition was inaugurated. Manitoba rinks have taken the title ten times and Alberta four times.

Gordon Campbell of the Thistle Club, Hamilton, snapped the Winnipeg string by winning the trophy in 1935 and Bert Hall's clever rink from Kitchener, Ontario, took the Dominion title in 1939. Cliff Manahan of Edmonton has won it twice, first in 1933 and then in 1937. Howard Palmer of Calgary, came through in 1941 and Billy Rose of Sedgewick, Alberta, emerged with the championship for 1946 after a play-off with Johnson of Manitoba and Ramsay of northern Ontario.

Manitoba's position as the curling capital of the curling world is not a lightly assumed distinction and there is little wonder Manitoba produces such excellent curlers. The M.C.A. is behind curling in every community and has a total of 210 clubs and 7,000 curlers on its membership roll. Some indication of what this means can be gleaned from the fact that during the war years the M.C.A. staged several curling events in aid of the Red Cross and Manitoba's knights of the broom contributed \$138,000.

Even non-curlers went for the Red Cross 'Spiels in a big way when city and country clubs invited curlers and non-curlers to drop in and have a game for two-bits. Laymen dug out rubbers, a thick sweater and a broom and went off to curl.

The result? Thousands of dollars for the Red Cross and a tremendous swing to curling by men in every age group. Today, every curling club in Winnipeg has that previously undreamed-of thing—a waiting list of prospective



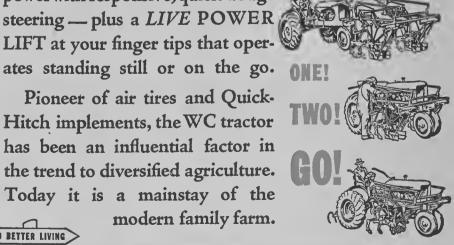
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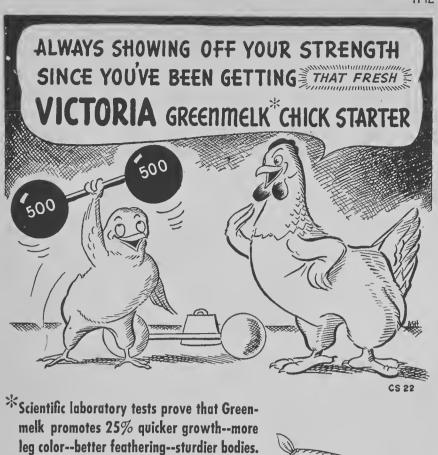
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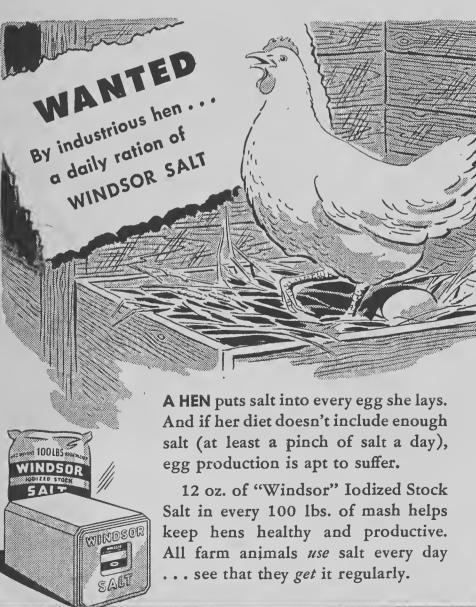




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A Scientific Triumph

Some brilliant scientific work has recently been concluded in the realm of poultry feeding which may lead to important practical results

ERETOFORE poultrymen desirous of producing the best grade of birds for the table had no better answer than to follow the example of breeders of other classes of livestock, to de-sex their stock at an early age. But caponizing is a tricky business beyond the technical competence of most farm poultry keepers, besides which it involves more or less loss by death from the operation, depending on the skill of the operator. A group of American agricultural college men at Stillwater, Oklahoma, headed by Professors R. George Jaap, Rollin H. Thayer and R. B. Thompson, building on scientific work of others, have worked out a technique that promises to accomplish the same results as caponizing without the use of a knife, a technique so simple as to be within the reach of all.

The farm public is by now so well informed as to the nature of hormones that it is possible to write of them without much preliminary explanation. Hormones manufactured in a bird's body seep into the blood stream and regulate body processes. The production of a specific kind of hormone at a certain stage in the life of a pullet makes her start to lay. Another hormone allows her to build egg yolks, albumen and shell. The same group of hormones which make it possible for the hen to lay eggs is responsible for fattening.

As early as 1916 it was known that the laying hen had more fat in her blood than the non-layer, or the rooster. Pullets store considerable fat when they start to lay. It has been proved that the rise in blood fat, as well as fat storage in the body is due to the action of female hormones known as

THE next step along this scientific trail was when laboratory workers demonstrated the possibility of raising the blood fat of young, non-laying pullets rapidly by injecting into their blood estrogens extracted from the glands of a laying hen. Interesting enough as a scientific fact, but it had no practical value because the cost of estrogens obtained in this way would be prohibitive. But British scientists overcame this difficulty in 1937 by discovering how to manufacture an artificial estrogen which they called di-ethyl-stil-best-rol. (The hyphens are ours to facilitate pronunciation.)

Practical poultry keepers will spot the next obvious difficulty. It is out of the question for a flock owner armed with a hypodermic needle to go through a squawking flock daily to catch each bird marked for fattening and administer the required dose. The British investigators got over that one by inserting small pellets of the drug under the skin of the bird. These were slowly absorbed and affected the bird for a period of four or five weeks.

At this point the Americans tried feeding the stuff to birds mixed with various components of the ration. Their conclusion was that diethylstilbestrol was not strong enough to give the required results when fed through the mouth. They thereupon bent their efforts on what the chemists call daughter compounds, more complex compounds in the same family. Out of this came dianisylhexane and dianisylhexene. These can be mixed with any of the fats commonly fed to poultry, and give the same results as the British pellets injected in the skin of the neck.

It is not possible within the compass of this article to give anything more than the briefest summary of the results obtained by this latest refine-

Broilers fattened for only two weeks

before killing present the appearance of prime capons with only a moderate amount of fat inside the body cavity. The skin is soft, velvety and smooth in texture, most nearly approached by that of the better "milk fed" broilers. In addition to the excellent fatness and finish, no sacrifice is made in growth rate. The hormone stimulates the appetite and more feed is consumed. The increase is not great. Estimates of probable increase in cost would be from one cent to 11/2 cent per pound of broiler for the hormone fattening. The increased value of the dressed bird at prewar prices should range from three to five cents a pound.

The effect of the hormone fed to males resembles the effect of caponizing. Within a week to ten days, depending on the dosage, fighting among the cockerels stops, combs and wattles shrivel and become pale. The birds fatten at approximately the same rate as the pullets. There is none of the characteristic redness around the abdomen and hocks which marks staggy or cocky birds. Everyone who has cooked these hormone fattened cockerels agrees that they are more tender and juicy.

F estrogen feeding is discontinued the interrupted development of maleness is resumed. Some buyers object to the pale appearance of the comb and wattles of the treated cockerels. The Oklahoma workers answered that objection by proving that small amounts of another drug called androgen restores the color of the face and its appendages without making any apparent effect on the other potentialities of the estrogens.

The investigators, in working out the dosage, and the most desirable length of fattening period, which turned out to be four weeks, are able to state what dangers attach to over-dosage and excessive feeding periods. There were some losses from over-applications of the estrogen, manifested as lipemia, which for popular purposes may be described as fatty degeneration, and a disturbance in the deposition of bone calcium which resulted in easily broken leg and wing bones in the carcasses. Fed in amounts recommended, death losses through the course of the experiments were no greater than among normal birds under corresponding circumstances.

As is usual after the publication of an article of this kind, The Country Guide will be besieged with letters from flock owners requesting further information and advice as to where this new drug can be purchased. None of these letters can or will be answered because there just isn't any further information available for distribution in Canada. Neither is the drug yet on the public market.

Distribution in the United States was forbidden by the department concerned until it could be ascertained what the effect on human health would be if poultry so fattened came on the market in quantity. The temporary government prohibition drew bitter complaints from business interests who object to all manner of control. But it is understood that a release has now been authorized in the United States. It yet remains for commercial distributors to arrange manufacture and sale in quan-

Ed. Note: Readers to whom the following publications are available will get more technical details from Poultry Science, November, 1945; Poultry Science, May, 1944; Endocrinology, November, 1945; and the U.S. Egg and Poultry Magazine, No. 51 (1945), pages 108-



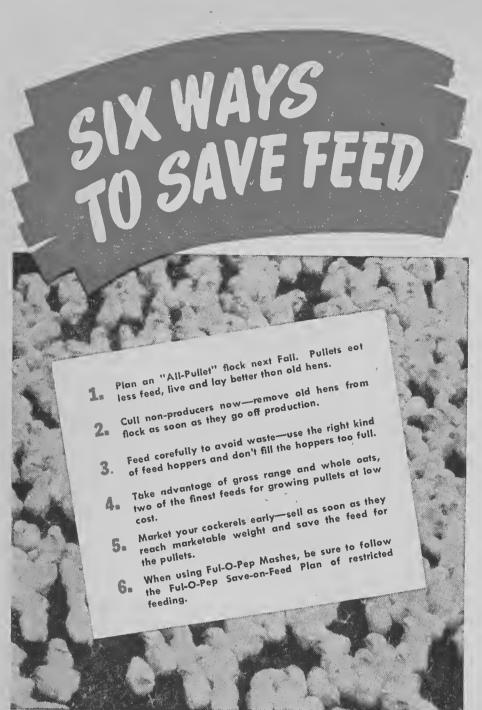
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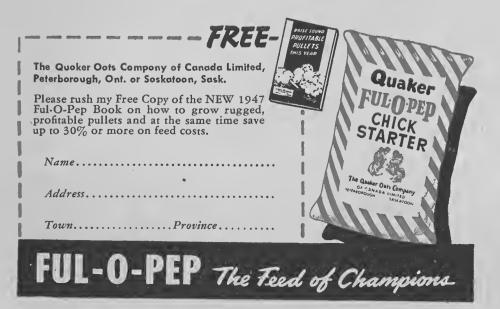


Canada's Feed Supply is Short Feed Carefully - Make it Count

100 million chicks are expected to be hatched this year and the poultry industry faces a very real feed crisis. Unless every poultryman cooperates in saving feed and stretching available supplies we cannot hope to raise all these chicks. So it's up to every individual poultryman to do the best possible job in the face of limited supplies.

Here's where Ful-O-Pep Users find the Ful-O-Pep Restricted Feeding programme is a real help to them. By following this economical plan they grow big profitable pullets with less feed than it would take with ordinary feeding plans.

So if you are feeding Quaker Ful-O-Pep Chick Starter and Quaker Ful-O-Pep Growing Mash, be sure to follow the Ful-O-Pep Save-On-Feed plan of restricted feeding. For details see your local Ful-O-Pep dealer.



Getting Ready For Spring

Farm atmosphere that everyone will recognize

By HARRY J. BOYLE

TOUCH of warm sun can certainly take the blight from late winter. Likely as not things have been rubbing you the wrong way, just a bit.

You notice the gate sagging at the end of the laneway to the barn . . . and the frozen ice and snow around the driving shed . . . and having to prime the pump when you water the stock . . . and you get mad at the sack stuffed in the broken window pane in the horse stable. You're about ready to give up keeping pigs all because of that pen you should have cleaned out a month before.

You begin to talk about how wonderful it must be, living in the city. A slip on the ice on the back stoop in the morning when you're taking the milk pails out, doesn't help matters. The wood seems to be getting low in the woodshed. Every time you try to call somebody on the telephone somebody's using the line.

The sun never seems to shine. The hens mope around in the hen house as if they were all waiting to die. You get a cold and whoop and holler and take some dismal mixture that makes you feel worse than ever. The cows don't even bother to scratch against the stalls. Even the bull has a half-hearted bellow. In place of standing around waiting for the sound of the harness, the horses take it easy. The cats don't even seem to be killing mice.

Everything's at a low ebb. Then along comes one of those bright, sunny days. The eaves start dripping. You can feel the warmth in the sun. Your cough has disappeared. The knolls start appearing in the fields and the snow is shrinking away. The rooster crows in the morning to beat the band. The dog chases the cats clear across the orchard. Everything seems to wake up.

In place of dragging through the chores and then holing up in the house afterwards, a man just naturally has to do something. After all the horses are stamping in their stalls . . . the cows go around the strawstack with their tails up . . . the hens are scratching on the gangway to the barn . . . the cats are rustling around in the hay-

mows looking for mice . . . the bull is bellering . . . and the pigs are going for their feed with the greatest of gusto. It's the kind of day you take for getting ready for spring!

In my case, I swing back the doors of the driving shed and decide to do a bit of "redding up." The spring mud will be too heavy for the car, so the first thing to do is clean out the old buggy. Sure enough, it's filled with the things we took out of the cutter the time we had to use it during the big winter storm.

The collection is a varied one. It includes some old fruit baskets . . . a broken bridle . . . a binder canvas that needs repairing . . . the can we put the trick antifreeze in during the summer . . . a half gallon of sheep dip . . . a felt hat that belonged to one of the threshing gang of two years before . . . two trace chains . . . a cracked whiffletree . . . and so on. It's quite a problem to find any place for this stuff so it all goes over into the cutter.

A sack half full of cement on the driving shed floor distinctly resembles a piece of statuary. There's no use of throwing it out until spring comes in earnest, so it's added to the cutter collection.

Two old newspapers in the tool box of the binder provide a half hour of reading matter. Back to work and a search yields a pile of grain bags that were put aside in the fall for mending. They're piled up outside the workshop door.

A neighbor drops in and it's time for a smoke and a chat. Prices, politics and gossip take up an hour or so and then you take a look at the stock in the stable. By the time a fellow gets back to the driving shed, the morning is pretty well worn away.

I usually start up the laneway to the house and realize that the sun has waned a lot. There's a chilly sort of breeze coming up around the end of the barn. I go back and close the driving shed doors.

After all spring is quite a piece away and there'll be lots of time left for getting ready!

An Australian Ranch Epic

The British film industry records a bit of the war effort of Australia's cattlemen

ANADIAN farm and ranch people, particularly the latter, who sometimes have the opportunity of seeing a movie, will await with keen expectation the coming to this country of the British picture, The Overlanders, now showing at metropolitan theatres in London and New York. It was filmed in Australia by Harry Watt, the English producer, and records a heroic effort on the part of a group of Australian cattlemen to

safeguard precious food required in Britain's titanic struggle. The story on which the film is based is well told in The London Times, from which we quote freely.

The cattle country of northwestern Australia lies in the Kimberley division, the white population of which is only a few hundred. Most of them live in Wyndham, on Cambridge Gulf, facing the Timor Sea. Here the West Australian government operates packing

houses, which annually kill about 30,000 cattle from the large ranches—stations as they are called in Australia—during the dry winter season extending from April to September.

When early in 1942 it seemed that nothing could prevent the Japanese from landing in the northwest, it followed that Wyndham and other northwest ports must be evacuated and the packing plants dismantled. No sooner



The route travelled by the Australian herders.

had this decision been reached than, as if to complete its inevitability, the civilian airport close to the town was bombed by Japanese airplanes.

The closing of the packing plants deprived the ranchers of their normal market, and it became essential to find another for them. Moreover, thousands of cattle could not be left to provide food for the expected Japs. It was decided that 5,700 head should be sent down to fattening areas north of Perth and that 10,000 should be herded 1,800 miles overland to Queensland. The southward movement was relatively simple, but the easterly trek was an unprecedented undertaking, a journey through country as wild and lonely as any in the world.

The stock was collected in record time by directions broadcast over the radio. Cattle owners were paid £2/10/0 upon delivery at local collecting points, with provision for final payment when the cattle were finally sold.

By this time it was so late in the droving season that it was difficult to procure drovers. By the time they had reached the Kimberley from Queensland where they were engaged it was well into the middle of the year, the season of drought. The starting point of the great trek was Wave Hill. From here the cattle went out in herds of about 1,350. Throughout the film each of the outfits that took a herd overland is spoken of as a "plant." Each plant numbered five or six men and 40 to 50 saddle horses. The plant bosses had to rely a great deal upon help from aborigines, since enlistments of men in the services had made the engagement of sufficient white help almost impossible. The movement of the successive herds was planned for 56 miles a week. Instead of daylight saving time, then legal in Australia, watches were set at sundown every night for six o'clock.

DROVING a big herd of cattle through difficult country is always a hazardous undertaking. Unfortunately 1942 was a very dry year in Australia. There could be no assurance that the trail would be through areas with sufficient growth to provide feed. There was certain to be a loss of beasts which could not survive dry stages between drinking places, and other losses arising from stampedes when cattle, halted for the night, are frightened by unusual noises in the bush. Thirsty cattle will walk into any wind blowing from the direction of rain. To hold them on their course is one of the Australian drover's chief worries, especially when his horse is also tired and equally crazed by thirst.

As any Canadian rancher knows, familiarity with the country is an invaluable asset. On a journey of this length, through country where cattle were never trailed, lack of knowledge of the terrain was an ever-present handicap. An added difficulty in 1942 was that the natives had been warned about the Japs and their pleasant little ways, the consequence of which was that they all moved as far into the interior as possible. Ever varying temperatures and changing types of pasture further complicated the task. Most of the country traversed was very different from the Kimberley, in which the cattle had been bred. Along the Murrinji, where part of the route lay there were patches of dense timber, and in places the only source of water was artesian bore holes. Much of the country is wildly beautiful, adding tremendously to the interest of the film.

The outcome of this epic trek was a loss of about 3,000 cattle, and of course a heavy loss in saddle horses. Nevertheless this adventurous undertaking provided many hundreds of tons of beef for service men in the southwest Pacific and elsewhere, which might have been a total loss. Most of the cattle were converted into boneless beef for the Allies in their counter-offensive against the Japs.

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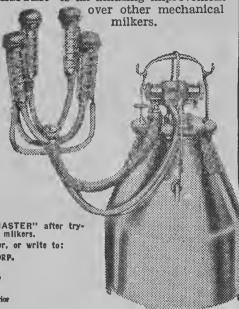
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Saskatchewan Cattle Breeders' Association

ANNUAL SALE

Of Pure Bred Cattle

Exhibition Grounds

REGINA

MARCH 26-27-28

	Males	Females
Aberdeen-Angus	24	6
Shorthorns	107	47
Herefords	151	57

Judging of all breeds, Wednesday, March 27, 9:00 a.m.

SALE

The order of the Cattle Sale will be as follows:

ShorthornsMarch 27th, 10:30 a.m. Herefords March 28th, 9:00 a.m.

This sale provides breeders with an opportunity to purchase select breed-Ing stock at reasonable prices. Offerings will be on hand from all outstanding herds in Saskatchewan.

Cattle Sale Auctioneers: J. W. Durno & Associates, Calgary. Swine Sale Auctioneers: B. F. Brown and Sons, Regina.

Catalogs can be obtained from:

C. E. Beveridge, Secretary, Department of Agriculture, Regina, Sask.

President: J. A. Baskie,

Whitewood, Sask. Vice-President: John Brandt,

Edenwold, Sask.

The Saskatchewan Swine Breeders' Association

will hold a Sale of Registered bred sows at the Exhibition Grounds at 1:00 p.m. March 26th.

Catalogs can be obtained from: ALEX HALL, Secretary, Department of Agriculture, Regina.

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Warble flies cause immense losses. Cattle lose weight. Cows go dry. Hides are spoiled. Watch for warble swellings and treat immediately. Insist on Chipman Warble Products, used by Western Stock Growers Association and Live-stock Branches of the Prairie Provinces. Eco-nomical. Easy to apply. Made to Dominion Government specifications.

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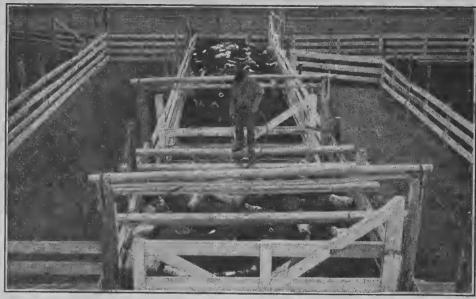
MARCH 31, APRIL 1, 2, 3, 1947

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LIVESTOCK



Spraying cattle for warbles can be done quickly, efficiently and economically. It also pays in better beef and faster gains.

Spray Now To Stop Warble Losses

Fairly simple treatment of all cattle could prevent millions in losses

T is interesting to speculate what the world would be like if there were no weeds to interfere with growth of crops or to poison livestock, and if neither crops nor livestock were subject to damage and illness from pests and diseases. One of two things would almost certainly happen. Either the price of farm products would come down very substantially as the result of much increased yields, or about half of the farmers in any one country would be forced into some other occupation, because of the abundance of food resulting from the absence of crop and animal losses.

Estimates are frequently given of the losses from individual insects or diseases to crops or livestock, and of course no single estimate can be strictly accurate. Still, these are valuable because they bring forcibly to our attention the seriousness of losses which, at first sight, appear to be very small. Take the losses due, in one way or another, to the warble flies on cattle. This loss is said to run into millions of dollars annually, and the farmer pays it. The estimate is that losses run as high as 25 per cent in milk production during the season of greatest annoyance from the flies, and that, in the case of beef cattle, the loss may be as high as ten per cent, due not only to running, but to condemnation of parts of the carcasses, losses on hides and also some measure of unthriftiness.

Control of the warble fly is fairly simple. Modern spraying equipment which permits pressures up to 400 pounds and such substances as rotenone powder, readily obtained from feed, seed, hardware and drugstores, or through local officials of departments of agriculture, make it possible to spray a sizable herd of cattle in a short time. and at very low cost. One treatment in April is better than none, but three treatments, at 30-day intervals, in March, April and May, are relatively more effective. Full information is readily available from any provincial department of agriculture or agricultural representative. During the last five years warble fly treatment has become very widespread, primarily as a result of a campaign conducted by R. H. Painter, Dominion Entomological Laboratory, Lethbridge, on behalf of the Dominion Department of Agriculture.

Dairy Cows Hold A Valuable Secret

She operates her own vitamin factory and produces milk as a sideline

people of Asia (China and India) eat is livestock and livestock products. In Europe, the proportion is about 17 per cent, and in North America, it is estimated at approximately 25 per cent. The reason for the low proportion in very densely populated countries such as India and China is that much more dry matter in the form of human food can be produced per acre in the form of grain than in the form of livestock. Actually, for every seven pounds of dry matter consumed by livestock, only one pound of dry matter is available for human food as meat, milk or eggs. The other six pounds are utilized by the animals for energy and keeping themselves warm, or are wasted during the process of digestion.

Aside altogether, then, from the food value of animal products arising principally from their palatability or high protein, muscle-building qualities, it is evident that as human food, livestock products must be relatively high in price. This is especially true in the case of pigs, for example, the diet of which is quite similar to that of man. On the other hand, ruminants, or animals such as cattle or sheep, which chew a cud, are adapted by nature to utilize grasses and other coarse, natural feeds,

ONLY about three per cent of what which man cannot consume to advantage. Cattle can be grazed on very cheap grass land or native pasture and will transform the nutrients thus secured, into high quality meat. Dairy cattle reared on small farms will make use of any rough pasture land or consume the much higher yields of cultivated grasses grown for use in the form of hay or pasture. By the peculiar character of their digestive systems, combined with the feeding of balanced rations by their owners, dairy cattle produce at times very high yields of milk, which is recognized as the one food consumed by human beings which is the most generally useful of all and especially useful to young growing children. From milk we obtain a wide variety of products including cheese, butter, whey, and casein, which has in turn, yielded a growing list of manufactured products.

This long train of events beneficial to man, stems from the facts that, (1) the cow has four stomachs which enable her to make use of coarse, rough feed, and (2) that she is a mammal, capable of producing large quantities of milk greatly in excess of the quantities required for her own young.

Being a lady, the cow keeps her breath sweet by carrying with her her

MORE PROOF on the Read this farmer's letter!

Rhein, Saskatchewan, January 21, 1946.

Goodyear Tire & Rubber Co., Toronto, Ontario.

In 1940 we purchased two tractors of identical type on rubber; one equipped with Goodyear Sure-Grip tires, the Gentlemen: other with the closed bar design.

Our family, as a whole, operate in the neighborhood of 2,500 acres involving the operation of four tractors, three self-propelled combines, and a large amount of small machinery. Because of this large farming operation, we are vitally interested in the service we receive from this equipment and the cost of operating same; all of which affects favorably or unfavorably our farm income.

The two tractors, mentioned above, were purchased at exactly the same time, and both have seen an equal amount of service under identical operating conditions. One year ago, we found it necessary to replace the tires with the closed bar design, with Goodyear Sure-Grips. The bars of the tires with the closed bar design were almost completely worn off, and no longer gave sufficient traction. The Goodyear Sure-Grips on the other tractor, are still operating efficiently, and we anticipate at least another two years service from them, representing about 60% more service than the closed bar design.

While a good percentage of our implements are already on rubber, it is our intention as tires and rims become available, to change over every implement possible.

You may rest assured, that with the above experience, nothing else but Goodyear tires will be used. This will also apply to our fleet of cars and trucks, from which we have received equal satisfactory service.

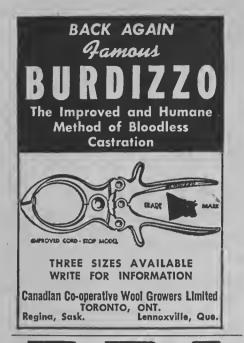
To any farmer contemplating the purchase of farm equipment on rubber, we strongly recommend that he specify Goodyear tractor and implement tires.

Yours truly

M. A. Hilderman.

MAKE SURE OF GOODYEAR SURE-GRIPS ON YOUR NEW TRACTOR OR FOR REPLACEMENTS. SEE YOUR GOODYEAR DEALER RIGHT AWAY.

Sure-Grip Tractor Tires the PROVED O-P-E-N C-E-N-T-R-E



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SELECTED ENTRY OF FEMALES WILL BE SOLD MONDAY.

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by holding milk duct in correct natural shape while healing and reducing obstructions.



ivory-like Bag Balm Dilators are shaped to normal milk-duct contours and will not dissolve, come apart or slip out. Cannot absorb pus infection or snag tender tissues. Fluted sides carry in soothing, healing ointment. Sterilized DILATORS, packed in antiseptic ointment, 75c at dealers or postpaid from Dairy Association Co., Rock Island, Quebec.

BAG BALM

own supply of sodium bicarbonate, but being of independent mind, she adopts by nature what certain primitive people accept as a social grace, namely, the habit of belching loudly and generously as a means of expressing satisfaction with their host's hospitality. Burping or belching by the cow, however, is an involuntary action resulting from the fermentation which constantly goes on in a healthy paunch or rumen. This really is a tremendous affair, and in a 1,200-pound cow, the first and second stomachs, which are really a sort of fermentation vat, may hold as much as 300 pounds of freshly ingested and partly fermented feed. During this process, many organic acids are produced, which if unchecked would develop too much acid in the cow's digestive system. Consequently, she produces a large amount of saliva to counteract this acidity. It has been calculated that a good-size, hard-working, cud-chewing cow will secrete about 120 pounds of saliva per day, which will contain as much as three-quarters of a pound of sodium bicarbonate. In addition to neutralizing acidity, experiments have shown that if onions or garlic are added to the saliva of the dairy cow, the odors of these vegetables will be covered up, presumably as the result of some compound present in the saliva.

It would appear that about half of the pasture grass which the cow eats could not be digested if it were not for the help of many different kinds of bacteria to be found in her various stomachs, particularly in the first and second. Some of the kinds of bacteria found in the cow's stomach cannot be grown in a test tube in the laboratory. Some of them enter along with the feed, and as far as is known, many of these are just unlucky, or are going along for a ride. When the feed enters the paunch, however, the bacteria and protozoa living there pounce on it immediately and proceed to demolish it. In the process, fermentation results, a great deal of gas is produced (most of which gets out by way of a belch), and along with these processes there are manufactured a number of different vitamins and enzymes.

No one knows exactly how the cow transforms these rough, coarse feeds into milk, nor what happens to the millions of organisms and the various forms of protein manufactured in her stomach. More and more is being learned all the time, however, by research scientists; and eventually, if we live long enough, we may finally learn the secret of how milk is made in the cow's body.

Water Intake of Dairy Cows

A N adequate water supply for dairy cattle during the winter months when milk and other dairy products are higher in price and efforts are made to secure everything a cow can produce, is of more than ordinary importance. Milk production is higher from cattle which have water available to them throughout the day than from those which are only watered once or twice a day.

It has been estimated that the average cow needs from 10 to 15 gallons of water per day. Cows that are very high producers, say those producing 100 pounds of milk per day, are likely to consume as much as 30 gallons of water daily. Part of the water intake of cows, of course, comes through the feed, and when cows are on pasture in the summer months and eat, perhaps, 125 to 150 pounds of grass per day, from nine to ten gallons of water would be consumed as grass, so that less water, as such, would be needed. Fifty pounds of silage probably contains around 31/2 gallons of water, but for cows capable of average milk production and given dry feed, such as hay or concentrates, the average daily intake of water that must be supplied is probably from 10 to 15 gallons.

Barley Is A Key Crop

Western feed and malting barley produced this year will have a marked influence on Canada's agricultural economy

THE recent emphasis on the production of more barley in western Canada may appear to some people to have been given undue prominence. This, however, is not true, for one very important reason.

As matters stand today, barley is in the nature of a key to Canadian farm policy, because if we decide to grow substantially more barley and ease off on wheat production, it will mean that we have set Canadian farm policy in the direction of a sensible livestock development and a decent and neighborly sort of co-operation between the farmers of eastern and western Canada.

The fact is that western Canada grows more grains of every kind than we need, the most important of which are wheat for human consumption and barley for livestock feeding, while eastern Canada grows comparatively small quantities of wheat and from 50 to 100 million bushels of feed grains less than she needs. The same amount of barley produced in 1946 will further discourage livestock production, both east and west. An increased acreage of barley, if the acreage is raised to around eight million acres as recommended, will have a three-fold result. It will provide within Canada the feed grains needed by eastern feeders; it will also make possible increased hog production in western Canada and permit us to take advantage of and maintain a profitable market in Britain for our bacon and

pork products; and it will also provide (if the premium for malting barley is increased to around 20 cents per bushel as recommended by the Canadian Federation of Agriculture) a profitable outlet for barley to the malting trade, especially for growers of barley in those areas where yields are substantially above the average for the prairie provinces.

Barley is superior to any other feed grain for bacon hog production. This does not mean that bacon hogs can be successfully reared on a 100 per cent barley ration. It does mean that 85 to 90 per cent of the ration may be of barley, and the resulting market hogs will grade well on the rail. For equal grading results from wheat-fed hogs, no more than around 65 per cent of wheat may be fed safely, while for oatfed hogs, the limit is about one-third of the ration.

If barley with not more than 10 per cent of dockage, and grading No. 2 Feed, is fed to hogs, Dr. E. W. Crampton, Macdonald College, Quebec, who has tested western feed grains extensively over many years, says hogs will increase from 40 to 200 pounds in weight, or in other words gain 160 pounds live weight in about 102 days. If the feed used is No. 3 Feed barley, or a 50-50 mixture of barley and oats, an extra two weeks will be necessary to make the same gain, while oats alone would require an additional three weeks.



A score or more of herd sires on The Sandy Gilchrist ranch south of Maple Creek, Sask.
Ranchers are looking anxiously to the U.S. beef market.

Reduce Low Grade Beef

BEEF ceilings for Canadian domestic use have been based on seven grades of beef since July 22, 1946; and in Manitoba, for example, the wholesale beef ceiling has been \$21.75 per cwt. for red brand beef, which must be from carcasses with a minimum weight of 300 pounds and otherwise meeting Dominion Government red brand specifications.

The second grade is blue brand beef, which carries a wholesale ceiling of \$20.75 per cwt. in Zone 10 (Manitoba). Next comes an in-between grade known as commercial beef, consisting of steers. heifers and well-fleshed heifery cows of a quality lower than blue brand and better than the next grade below, at a ceiling of \$19.75. The fourth grade is known as plain beef, from steers or heifers only, with medium proportion of lean meat to bone, and with some fat over the ribs and loins. The ceiling for this grade is \$17.75. The next lower

grade is utility beef, at \$16.75, consisting of beef from young to mature cows and bulls, fairly well fleshed, with reasonable fat covering.

Below these grades are two designated as "cutters" and "boner" beef. The former carries a ceiling of \$16.25, while boner beef has no carcass ceiling price. Cutter beef is from steers or heifers only, with a fair proportion of lean meat to bone, but such carcasses may have only a thin exterior fat covering. Boner beef is from steers, heifers, cows or bulls, with a large proportion of bone to flesh. The carcasses may be without any exterior fat.

It is these two lowest grades of beef for which UNRRA until now has provided so large and relatively profitable a market. With this market disappearing, live animals producing carcasses of these types may well become a burden on the market, and are likely to have, as they have previously had, a depressing effect on the prices for better grade animals.





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They're made as carefully as Cutter products for human use scientifically tested - always dependable. BLACKLEGOL for blackleg; PELMENAL and HEMSEP-TOL for hemorrhagic septicemia and related diseases. Ask your druggist for Cutter-for sure!

CUTTER Laboratories VANCOUVER . CALGARY REGINA . WINNIPEG

Beef Club Calves

DURING the late summer, junior farmer beef club members will be exhibiting their calves at field days, and later disposing of them, for the most part by auction, for varying prices. Some boys and girls, unfortunately, will be sadly disappointed, because their calves did not get sufficient care and feed to make a worthy showing, or because their parents were unable or failed to provide them with calves of sufficient quality to start with. Very often these disappointments are lasting, but in other cases, club members and their parents learn valuable lessons and the next year come up with much superior entries.

Since cattle prices will remain satisfactory throughout this year, the chances are that beef clubs will be popular in 1947. Last year the junior baby beef clubs of Saskatchewan gathered in \$255,680 from the sale of their calves which collectively weighed 1,538,482 pounds alive. They received an all-time high weighted average price of 16.61 cents per pound live weight, but unfortunately the variations in prices received was very wide, running from a low of eight cents per pound to a high of 55 cents per pound at the fat stock shows.

A fact arising out of the experience of Saskatchewan junior baby beef club members last year that is of fundamental importance should be kept carefully in mind by club members and parents. While 81.6 per cent of club calves yielded beef grading either red or blue brand, as compared with 75 per cent the year before, the percentage is still not high enough. There is really no good reason why any club calf should grade below blue brand, even though 57.8 per cent of them graded red brand last year. It is nice to know that progress is being made, as evidenced by the fact that only 50.7 per cent graded red in 1945. But a great deal of special attention is being given to junior clubs from one end of Canada to the other, and it is only a reasonable recognition of this interest on the part of the general public, that parents should furnish junior club members with the best animals possible, and that club members themselves should be conscientious in the feeding and care of them.

What Does Milk Cost to Produce?

THERE are few figures available as to the cost of milk production, though perhaps more than with any other important farm product except hogs. Area surveys have been conducted which have indicated high, low and average costs for the area, but farmers' costs are changing steadily so that it would be difficult to apply area figures to a particular farm at any given time without knowing the ration being fed and the local prices for feed.

At the Dominion Experimental Farm at Nappan, Nova Scotia, records have been kept over a period of years, as to the cost of milk production in a herd of Guernseys and Jerseys, averaging 37 cows and yielding 306 pounds of butterfat. The cows were pastured an average of 130 days each season, and the average value of pasture per day, as compared with stable feeding, was the equivalent of six pounds grain, 14 pounds nay and 25 pounds succulent feed such as green feed, silage or roots. On this basis, therefore, feed requirements per 100 pounds of milk averaged 40.4 pounds grain, 76.2 pounds hay, and 195.9 pounds succulent feed. On the basis of stable feeding, the year-round average feed consumption per 100 pounds of milk is given as 28 pounds of grain, 48 pounds hay, 144 pounds succulent feed and 2.06 days pasture. Calculations under Nova Scotia conditions of the average yearly feed costs of 100 pounds of milk, indicated that from June to October the feed costs alone averaged 88 cents over a period of good and bad crop years, and \$1.41 from November to May.



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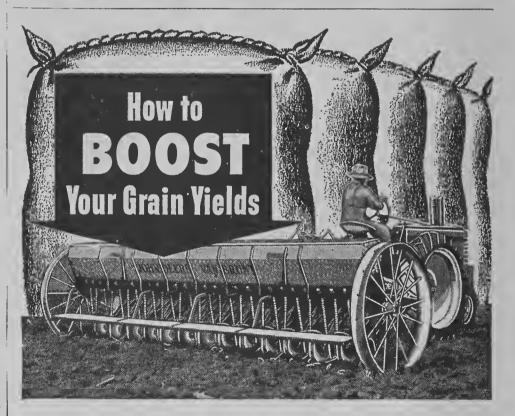
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Ground Limestone for Sows

SOMETIMES the hindquarters of nursing sows become paralyzed quite suddenly. Generally this occurs while nursing a litter or soon after, and is most often traceable to a shortage of calcium in the feed during the gestation period. The difficulty could have been overcome by feeding one per cent of ground limestone in the chop, or in the concentrate if a concentrate is fed before farrowing, and the ground limestone should be continued at least during the nursing period.

Calf Scours and a Challenge

N the many articles on calf scours that appear in the magazines, one point seems to be overlooked and that is, cleanliness. If someone who is in a position to test it will only try, I think he will find dirty pens are the chief cause of calf scours.

I have repeatedly found when the pen gets a little wet while the calf is young that scours appear and soon stop when the pen is cleaned and dried. I use sawdust if I have no straw, for hay will not prevent the ammonia smell unless a lot is used.

Another thing you might get your readers to tell you, and that is how the expression "a horse laugh" comes. Dan McGowan once asked it in one of his articles and I expected some to reply, but as none were published I presume none were received. — ALEX WOODS, Sicamous, B.C.

(Anybody ever see or hear a horse laugh?-Ed.)

Feeding Habits of Cows

DURING the war years when Britain was prevented from importing the usual quantities of concentrates, British cows had to change their habits of eating, as did the British people. They have, in effect, extended their stomach capacity to take 35 per cent more bulk of food than before the war, with the result that they used up more energy in digesting their bulkier ration. Concentrate supplies were .8 pounds per gallon of milk less during wartime than when these feeds could be imported. In spite of the fact that the quantity of home-grown concentrates was increased from .2 pounds before the war to 1.4 during the war years, the quantity of hay fed remained about the same, at around 3.5 pounds per gallon of milk, but straw increased from .5 to 1.3 pounds, while roots and green fodder increased from 5.2 to 11.8 pounds per gallon.

Strong efforts were made to improve the yield of grazing land, because grazing is the cheapest feed that is available for livestock. Studies of the eating habits of cows on pasture indicated

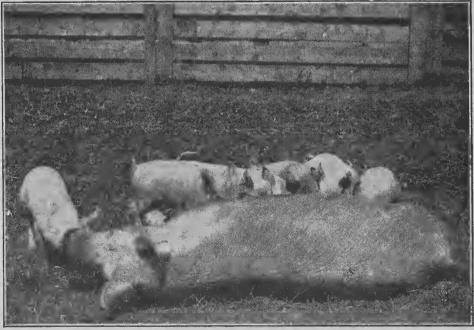
that where there was a dense growth, four to five inches in height, capable of yielding 4,500 pounds of green pasture per acre, the cows would eat 150 pounds of grass per head in approximately seven or eight hours of grazing time. or about five hours of actual feeding time. When the pasture available was about 2,200 pounds per acre, the cattle could eat only 90 pounds in that time, and when it fell to 1,100 pounds per acre, the cattle could get only 45 pounds, or barely enough for maintenance. Likewise, pasture ten inches high, yielding 5,000 pounds of feed per acre, was so mature that the cattle would eat only 70 pounds per day. It was discovered, too, that daily droppings of manure by one cow were sufficient to cover eight square feet of surface.

Iron for Anemia

EACH year hundreds of pigs die and are rendered worthless to their owners, when they would be worth, say, \$30 each, if brought safely through to marketing age. The greatest number are lost up to the time of weaning and several different causes are responsible. One of the most important, however, is what is known as anemia, and pigs lost from this cause are frequently the largest and most vigorous when newborn. Anemia develops from lack of iron because young pigs cannot obtain enough iron from the sow's milk, even if she is fed iron. Outside pigs are better off, since they can obtain iron from the earth, but the remedy for this deficiency is simple. An iron tablet (ferexate), given according to manufacturer's directions on the 3rd, 6th, 9th and 12th days after birth, will supply the necessary amount of iron. If reduced iron, instead of ferexate tablets, is used, half the amount required to cover a dime to its own thickness constitutes one dose, according to the Alberta Department of Agriculture. Doses of reduced iron should be given on the 3rd, 10th and 18th days.

Stallion Records and Annuals

The Book Department of The Country Guide has Stallion Service Record Books available at \$1.00 each, postpaid. Copies of the North British Agriculturist and Farming News Livestock Annual are now in and will be supplied at \$1.00 each, postpaid. Copies of the Scottish Farmer Album are expected soon and will also be sent for \$1.00 each, postpaid, as and when they are received. Address, Book Department, The Country Guide, 290 Vaughan Street, Winnipeg, Manitoba.



[Dom. Dept. of Agr. photo. Outside, these piglets can root for the iron the sow's milk cannot supply. Inside, they would require iron tablets during the first month.





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He Learned the Hard Way

Wm. Barnett, well known for many years as a Clydesdale breeder, exhibitor and judge, recalls a few incidents in his early experiences.

T is hard to write anything about the noble Clyde or any horse in this mechanical age. In fact, there is only the race horse that appears to be holding its own. Horse racing is the hottest sport in America today. The crowds who go to see the ponies are growing almost too fast for the tote machines to handle. Imagine our cousins to the south of us betting an amount the past year within a million or so of one of our past victory loans.

My first pure-bred Clydes were purchased at the Brandon Summer Fair nearly 50 years ago. An eastern firm had imported 52 head from Scotland and England. They bluffed the fair board that they were entering and exhibiting at the Fair, a dodge to have stabling room at the Exhibition Grounds and a fine place to meet prospective customers. They did exhibit a few, including the first prize winning stallion, which I shall call Lord Walter. I remember there was much dissatisfaction among Clyde men at this, alleging the judges were bribed. The owners of Lord Walter thought it good advertising for the disposal of their other stock. After the exhibition Lord Walter was immediately shipped back to the old land with the assertion that he was too valuable a horse to leave in Canada.

My ambition was to own a good team of Clydes and I picked a team that took my fancy. But as an amateur I asked the editor of the old "Nor'West Farmer" of that day his opinion and what I should pay. He said the team was okay but that price would be between six or eight hundred. I approached the owners and they showed me their pedigrees. The one filly had taken a first prize as a foal and a first as a yearling in the old land. She was by Baron's Fashion, son of the noted Barons Pride. She was also related on the dam's side to this great horse. The other filly was by Lord Lothian, another noted horse in his day. The price I paid was

It was the year of drought in Manitoba and horses were not selling any too well, so the dealers, unknown to me, had wired my bank as to my financial standing. The reply must have been satisfactory for I was urged to buy three more, which I did, averaging \$350 each. One mare, a Lothian, was in foal to "Silver Cup," thrice champion at the Royal Show in England. Dealers told me if the mare had a horse colt they would give me \$800 for it when weaned. She had a horse colt, a beauty: unfortunately it lay down, when I let dam and foal out for exercise, in a furrow of a fireguard I had plowed, and in struggling to get up it hurt itself and died.

MY district had no first-rate stallion at that time so I purchased one from the same firm. Like other amateurs I admired the pedigree too much, although he raised lots of good colts. His sire was "Oyama," a Cawdor Cup winner, but no good as a breeder, although he was known as the perfect Clyde and the University of Saskatchewan used his photo on the front page of their Clyde bulletin showing the various qualities a Clyde should possess. I paid \$1,500 for this horse, most of it in colts. Dealers I bought him from took four colts, from yearlings to two-year-olds.

I found out from parties that eventually bought these colts that two of them would have paid for the stallion if I had been an expert and a garrulous salesman. Those that bought came to my place for their purchase. I would

say to them, "Well, I guess you paid a stiff price for that animal," and they would tell me it was double what I had received. But not to discourage the purchaser I would say, "Well, I suppose they are entitled to a little profit as it takes money travelling up and down the country horse dealing."

I exchanged this horse after a few years for another horse whose sire was the noted "Montrave Mac." He was all quality and took the leading prizes at the local fairs. He was 200 pounds lighter than my old horse; the type of horse that noted editor, Richard Waugh, of the old "Nor'West Farmer" railed against as having no "bread basket." but I can see the late Dean Rutherford stroking its legs and exclaiming to the crowd: "That is the type of leg, men!"

I found the Clyde very healthy, and my losses were due to joint-ill or bloat from breaking into granaries, losing three this way. It seems a pure-bred Clyde will eat till it bursts, but I never lost a grade that way. Nearly every colt foaled indoors died of joint-ill, but none foaled outside were afflicted, so I bred mares to drop their colts around the end of May. Dirty barns have nought to do with joint-ill as I had a new barn first year these mares foaled, with only themselves put in time due to foal. I have had them foal on top of wet, dirty manure piles outside with no ill effects. My wife's opinion was the exercise the cost got soon after birth, which is not possible in a small box

THE senior member of the firm (now defunct and all gone to their reward) from which I purchased my horses, seemed generous to me and before his death I always got a barrel of apples each fall from his Ontario farm. On a visit to my place one Christmas before the first world war he pulled out a handful of golden sovereigns and gave my children one each. Adam Halliday, of Shoal Lake, recently honored by the Clydesdale Association, also purchased some fillies from him, and after one deal the head of the firm said we two could bunk with them in the Exhibition Barn, and save hotel charges. They took us for our meals to one of many eating places on the grounds.

We were comfortable between the bales of hay, but on two consecutive nights we had a bad scarce when a massive, ugly-tempered Belgian stallion kicked his box-stall into matchwood. His fits of rage would commence around 3 a.m. Probably a bad dream started him on his tantrums. The firm from which we bought our horses was most obliging in procuring car, hay, oats, bran, etc., for my trip home. One thing they gave me was a large wood pail of molasses. I hung this on top of the car, and sometime in the night near Langenburg one of the fillies got loose. With a boy's intuition for sweet stuff she upset it on top of my head while I was asleep. You can imagine what I felt and looked like in the morning.

No doubt the reputation of the Clyde was hurt by unscrupulous importers who brought to this country any Clyde with a pedigree. They were after the money. There were others who loved the Clyde above all other beasts of the field and above filthy lucre; men like "Scotty" Bryce, John Gräham, Robert Sinton, Turner, Bredt, and many more. Think, you old timers, of mares like Mayoress, Irene and Pyrene, and stallions like Perpetual Motion, Gartly







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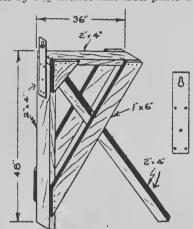
Monarch

March in the Workshop

Items big and little for spare hours

Scaffold Bracket

These scaffold brackets are used in carpenter and painting work. Use four of them at a time and with one set-up you can paint from 10 to 41 feet. Once made right, they can be hung on a building by inserting one or two nails working in a slot. When you want to move them, just lift them up. The 1/16inch by 3½ inches flat iron plate bolted



to the face of the bracket has a hole in the top part large enough at the bottom to slip over the head of a four-inch spike, but narrows above so it will hold firmly on the nail. The brackets should be supported with 2 by 4's as shown, and the brackets should never be used without such support. A man's life is too valuable to be risked on a single nail, and besides it is not always desirable to drive a large nail firmly into the finished wall of a building, or it can't be done with a masonry wall. The brackets also should be braced with strips tacked diagonally from one to the next, and also with other strips to window frames to prevent twisting. One can't be too careful.--I.W.D.

Hammer Head on Wrecking Bar

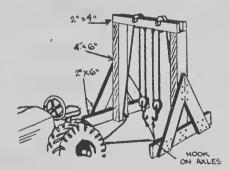
In demolishing old buildings with a wrecking bar a hammer is needed as



much as the wrecking bar. Why not combine the two? That is what I did. A small piece of iron is welded on as shown and there you have the combination.-H. L. Petit.

Wagon Hoist

This sketch shows a very handy wagon hoist for unloading grain into a farm elevator which any farmer can make at a small cost. It is indeed a great time and labor saver. It would be



better to have a heavy wagon tire brace at each upper corner to prevent rocking sidewise when a heavy load is raised. The hoist has to be staked or fastened in some way so that it will remain stationary when the tractor begins to move.-I.W.D.

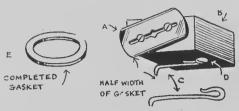
Oil Spreader Box

Two coats of used crankcase oil at the beginning of the season will effectively ing to the spreader box. Coat the oil

on with an old paint brush, just like paint. After the first coat is well soaked in, apply a second coat.

Gasket Marking Device

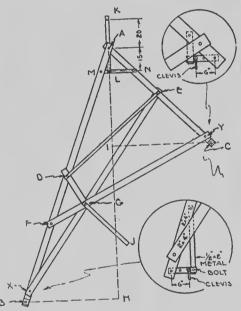
This little device is made by taking a small block of hardwood (B) and attaching to it a razor blade (A) by means of two round-headed screws. Then a piece of wire is bent as shown at (C) and pivoted with the roundheaded screw on the bottom of the block as shown at (D). To make the



gasket of the size wanted, screw (D) is loosened and arm (C) is set half the width or size of the gasket to be made, from the edge of the razor blade. The screw is then made tight. Point (C) is then pressed on the sheet of cork, and the block is turned round a few times while lightly pressed. After the first cut is made, point (C) is again set. but 1/4-inch nearer the edge of the blade. A second cut is made and the gasket has now been completely cut. -Paul Tremblay, St. Paul, Alta.

Two-Implement Hitch

A two-implement hitch developed by the South Dakota agricultural engineering department for pulling two implements, such as drills, duckfoot cultivators, rotary rod weeders and discs,



having a cutting width of 10 feet. The inset shows the adjusting device used to bring the equipment into the proper alignment.

Hitch attachment for tractor is made of strap iron about one-half inch thick and from two to three inches wide.

Point E is always halfway between A and C.

C to Y is always six inches.

Angle iron or 2x4 inch brace G-J from front implement to hitch. For drills and field cultivator attach end of brace to front frame about 16 inches in from the wheel. For disc hitch attach end of brace to disc frame near seat attachment. Adjust length in the field until implements trail as desired.

Length of Material

Bolt Hole Bolt Hole	Table	Past Bolt Holes Inchea	Length of Pieces Ft. In.	Pieces Required Inches
A to B	14-5	5	14-10	2x4
A to C	7- 1	5	7- 6	2x4
E to X	12-10	5	13- 3	2x4
F to Y	9- 5	5	9-10	2x4
D to G	1-11	5	2- 4	2x4
D to E	6- 4	5	6- 9	1/2-inch
B to X	0- 6	· ·	0,- 0	rod or
A to D	7- 0			
E to G	6-11			atrap or 2x4
		a for front	d=111 to 0	£
Length of stub tongue for front drill is 6 feet. Length of stub tongue for rear drill is 7 feet.			reet.	
***************************************	DAMED COTTE	re tor 1681	arm 18 / 10	Pet.



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Alfalfa Seed Setting A Serious Problem

Honey bees would be more efficient if flowers tripped more easily

SEED setting in alfalfa seems to be principally determined by insects and their activities, according to Dr. P. J. Olson, Department of Plant Science, University of Manitoba. Before the recent conference of Manitoba agronomists, Dr. Olson concluded that available evidence points more and more in this direction.

Both beneficial and injurious insects affect seed setting. The injurious ones on alfalfa are the Lygus bug and the alfalfa plant bug. The former is more serious in the United States than in Canada, though it is an important factor even in northern Saskatchewan. Entomologists in Minnesota regard the alfalfa plant bug as a major factor in that state. The Lygus bug injects a toxin into the alfalfa plant with the result that the blossoms drop, but vegetative growth increases.

Unlike the leaf cutter and the bumble bee, the individual honey bee is a very poor pollinator of alfalfa. This is because the honey bee is able to secure nectar from the alfalfa flower without tripping it, and observation has shown that accidental tripping is comparatively rare. In order to get pollen, however, honey bees must trip the flower, but since alfalfa is not an especially attractive source of pollen, the number of pollen gatherers in alfalfa fields is comparatively limited.

Leaf cutters and bumble bees, on the other hand, are not nearly as numerous as honey bees, and judging from the experience at the Utah experiment station, in the centre of an extensive alfalfa seed crop area, the very large number of honey bees present more than makes up for their individual inefficiency.

Ordinary alfalfa not only must be tripped to be fertilized, but is self-fertile only to a limited extent. Gonsequently, the pollen must be distributed from one plant to another, which makes bees essential, since such tripping of the blossom as occurs, takes place while insects gather nectar or pollen.

Dr. Olson suggested that plant breeders are working on the problem of improved seed setting through the development of first generation hybrids and of easy tripping strains. In any case insects must ultimately trip the flower, so that essential work, looking toward the improvement of alfalfa seed crops, lies in increasing the probability of insect visits to alfalfa flowers. It has been suggested that the artificial rearing of bumble bees and leaf cutters might be attempted; also that pollen traps, by which the bees would be robbed of their pollen load in order that they might make more frequent visits to the blossom for more pollen, would be helpful. It has been suggested also that bees might be trained to seek only flowers carrying certain odors; and that bees of superior honey production, thereby requiring additional supplies of nectar and pollen might be bred; or even that strains of bees might be bred which would concentrate on brood production, which would increase the pollen requirement of this strain.

Necessary preliminaries to effective work in this field are co-operative work by entomologists, agronomists and beekeepers, as well as thorough surveys of insect populations in areas where alfalfa seed production is attempted on any appreciable scale.

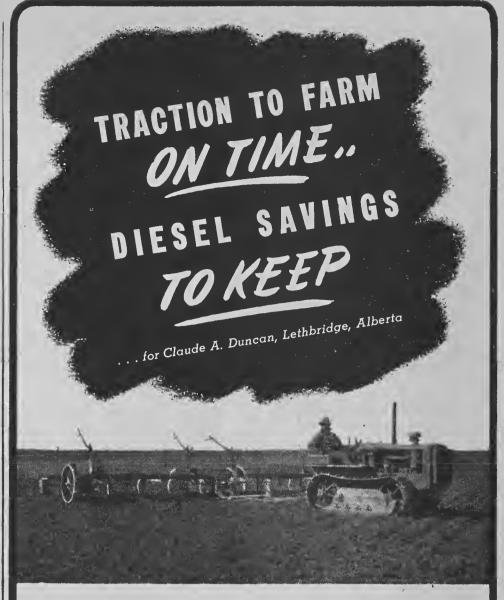
Rotations Help Both Soil and Crops

Fallowing is a necessary evil, to be avoided where practicable

PRACTICALLY every farmer agrees that some system of planning a sequence or rotation of crops suitable to the area, is desirable. By no means all follow a system which is designed to maintain fertility of the soil as well as secure crops year after year. Due to our comparatively low average rainfall, the system of summerfallowing has become a habit which is not always a good one.

Because western Canada produces so much wheat, and because certain areas have found a summerfallow-wheat rotation, or a summerfallow-wheatwheat rotation most practical, the tendency has been to follow such cropping systems even in areas where they are not needed.

The Dominion Experimental Station at Lethbridge has recently been suggesting that the percentage of land in summerfallow could be profitably decreased; and a representative of The Country Guide was surprised to find that at the Dominio Experimental Station, Lacombe, visited last summer, in one system of crop rotation, which has been followed consistently on a certain area of the farm since '911, no



Here is Claude A. Duncan's Diesel D2 Tractor rodding 7 acres of wheatland per hour on only $1\frac{1}{2}$ Imp. gallons of fuel. Mr. Duncan also owns a Diesel D4.

● It was in 1929, that Claude A. Duncan, Lethbridge, Alberta, bought his first "Caterpillar" track-type Tractor. Now — 18 years later — Mr. Duncan still uses this make to farm his 2500 acres and will tell you that he'd surely hate to have to go back to any other power.

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In practical terms, this means that he has positive traction to plow early — even with soft spots in fields. It means power to pull a wide drill-hitch and gain the benefits of early seeding. It means ability to cultivate summerfallow speedily to save time and conserve moisture.

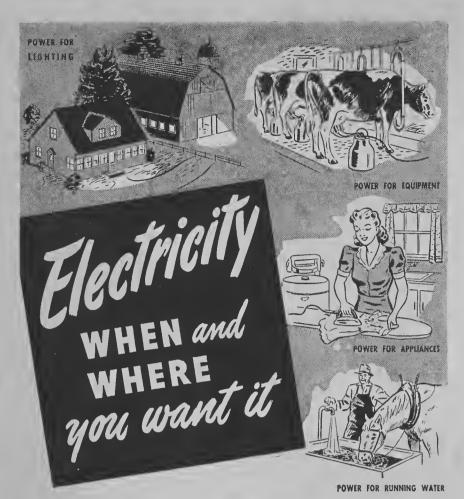
And unfailing traction assures power for emergencies. "I have harvested with my Diesel D4 and D2 when wheel tractors would have been helpless on the soft soil", states Mr. Duncan.

Mr. Duncan has worked his Diesel D2, for example, 7044 hour meter hours in 7 years — figures that it's good for another 10 years with a moderate outlay.

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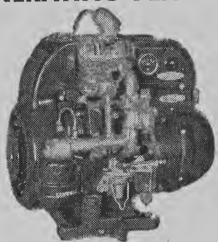




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land in that rotation has been summerfallowed during the whole 35-year period. Significant is the fact that, on that particular land there is no weed problem. In this six-year rotation, an intertilled crop, or row crop, such as potatoes, corn or other cultivated crop, is followed by wheat and then by barley seeded to a hay mixture, which stays down for three seasons, and is plowed, after first cutting, the sixth year, and manured at 20 tons per acre for the intertilled crop which follows is the first year of the next round. In 1946, the thirty-fifth year of this rotation, wheat following an intertilled crop produced 60.1 bushels per acre, or 37.5 bushels per acre more than wheat grown after fallow in rotation C, the standard fallowwheat-wheat rotation. Equally striking was a 63.4 bushel crop of barley secured last year in the same six-year rotation where barley followed wheat the second year after the intertilled crop and the third year after manuring.

For the same length of time at Lacombe, a seven-year rotation has been followed on another piece of land, in which summerfallow is followed by wheat, seeded down to a mixture of timothy and alfalfa. The wheat stays down for two years, and is manured and plowed down after the first cutting in the second year. The fifth year is an intertilled crop of potatoes or corn, the sixth year wheat and the seventh oats. In this rotation in 1946, a yield of 114.2 bushels of oats was secured on land which, in 1945, produced a 55.6 bushel crop of wheat after potatoes. In this rotation the soil is manured once during each seven-year period, and the land has been kept free from weeds, soil fertility has been improved, the cost of summerfallowing reduced, and an average yield of wheat secured after the first year summerfallow, which was 18 bushels per acre more than wheat after fallow in the ordinary three-year rotation of summerfallow-wheat-wheat.

In the latter rotation the cost of summerfallowing is very high, weeds have become a problem with which it seems impossible to cope, and weed seed dockage is excessive. The fertility of the soil has decreased, and the yield per acre correspondingly. "This rotation is very unsatisfactory," said Superintendent G. E. DeLong, "because it lacks forage crops to control the weeds. Wild oats have become impossible to control. Year after year the stubble wheat is loaded with them."

On the light soils of southern Manitoba, which are subject to soil erosion, the Dominion Experimental Station at Morden recommends that summerfallow substitutes be given priority over straight summerfallow. Morden finds that grasses and clovers reduce soil erosion and supply organic matters, eradicate weeds and help to control crop diseases. Yields of crops after

alfalfa have been increased, whereas for at least one year after crested wheat grass, yields are generally lower. Yields of wheat after corn in the same area have been nearly as great as yields after summerfallow. In wet years, wheat after alfalfa has yielded better than wheat after sweet clover, but in dry years, oats or wheat after the sweet clover have been better.

At the Dominion Experimental Farm, Indian Head, a nine-year rotation has been compared for 35 years with the standard fallow-wheat-wheat rotation. The nine-year sequence is summerfallow followed by wheat, then oats seeded to an alfalfa and grass mixture, which in the third year is manured, plowed and cultivated as needed until freezeup, then followed by corn, wheat and oats. In this rotation, wheat after summerfallow has averaged 34.1 bushels per acre, as compared with 26 bushels after summerfallow in the summerfallowwheat-wheat rotation. Wheat after corn, in the nine-year rotation, has averaged 1.2 bushels per acre more than wheat after fallow in the three-year rotation. Oats, in the third year of the long rotation, have averaged 43.3 bushels per acre, and in the seventh year 47.6

The Old Enemy - Couch Grass

REAL estate men in the Red River Valley in North Dakota used to say the best way to get rid of couch grass was to sell the farm to some man from back East when there was two feet of snow on the ground.

Couch grass has good points: 1, It restores soil fertility by putting fibre and humus back in the land; 2, it is one of the most nutritious hay and pasture grasses we have in Manitoba; 3, it gives the earliest spring pasture and remains green until freeze-up; 4, it can be made into grass ensilage without the use of preservatives.

The first crop of grain after a thorough couch-grass-killing summerfallow is like the crops we used to grow on prairie breaking, vigorous and free of annual weeds.

This spring, this section would have had serious soil drifting, but the couch grass prevented it.

Farmers themselves and the public generally do not realize the extent to which our farms have become infested with couch grass. But its spread has done more to restore soil fertility in five years than any other re-grassing program would in a generation.

To get full value from couch grass it must be used for hay or pasture, and these pastures and meadows must be handled right. Every stockman knows the right methods. Cattle or horses in thin condition turned on good couch grass pasture early in the spring soon put on flesh.



[Guide photo

To maintain soil fertility, humus and moisture-holding capacity are necessary as well as actual mineral plant foods. Hay and pasture crops in a rotation meet these needs.

Stockmen in the East and South are making wide use of couch grass for grass ensilage; we could practise the same plan in Manitoba.—Gordon McLaren, Pipestone, Manitoba.

Note:—On the subject of eradicating couch grass, G. E. DeLong, Supermetendent of the Dominion Experimental Station at Lacombe, has answered a query as follows:

"We have been endeavoring to find an easy way to eradicate couch grass during the 26 years I have been at this station. As yet I must confess I do not know of any easy way. Our experience has been that the only way one can be sure of eradicating it is to work it with an implement which will bring the roots to the surface where it can be killed by the hot wind and sun. We find that a combination of the one-way disc, springtooth harrow and the ordinary drag harrow is the best. If the work on the land is started with a one-way set to cut about one-inch deep and this is followed with the ordinary spring-tooth harrow and a spike tooth harrow to knock the soil off the roots loosened by the one-way and this operation repeated until all the roots have been brought to the surface as outlined, one can eradicate this grass providing the weather is hot and dry. If the weather is rainy such as it was in June, 1946, the only way we know that one can be sure of killing couch grass is to bring it to the surface as outlined, rake it up and haul it off the fields. If the weather is reasonably dry, however, we find that approximately 12 to 14 times over the land with a spring tooth harrow or cultivator will bring all the roots to the surface. Our experience has been that all this work can be given in one day if possible and be even more effective than if it is spread over the whole season at weekly intervals."

Irrigated Land Yields More

FARMERS with no experience in irrigation farming will be surprised to know that yield per bushel of wheat on irrigated land exceeds that on dry land by practically two to one. Experience at the Dominion Experiment Station, Lethbridge, over the last nine years indicates this, with respect to the combined yields of five varieties under test: Thatcher, Reliance, Canus, Red Bobs 222, and Marquis. Adding together the nine-year averages for each of these varieties grown on dry land, a total of 162.1 is secured, while comparable figures for the same varieties on irrigated land give a combined yield of 321.2.

Lumber From Old Buildings

SOME farmers may find it possible to relieve the present lumber shortage, at least as far as their own needs go, by the simple expedient of tearing down some building no longer needed for the purpose for which it was intended.

Wastage of shingles can be kept at a minimum by ripping them off with a flat shovel, starting at the bottom edge of the roof and working up.

After the roof boards have been removed, don't attempt to take off the sideboards while the walls are still standing. Loosen the board from top to bottom at the corners and let the sides fall outwards so that the uprights are on top. Lay a 2-inch board beside the upright, on top of the boards to be removed, and pry the upright away with a crowbar. By this means damage to lumber will be kept at a minimum and nails will be kept in reasonably good condition for further use.

The general appearance of some farms may be improved simply by tearing down some old, unused, unpainted building, whether the material is needed immediately or not.—G. W. ROBERTSON, Foremost, Alberta.

Straw Bunchers for Combines

IN areas and on farms where a considerable quantity of livestock is kept, the use of the combine during recent years has made serious inroads into the supplies of straw available as reserves of roughage. In few other places throughout the world is it so desirable to have ample reserves of feed for livestock as in the prairie provinces.

Many farmers have attempted to make and some have succeeded in making personal devices for bunching the straw on the combine, so that it can be gathered and stacked conveniently. A comparatively simple buncher can be made from plans available from the Dominion Experimental Station at Lethbridge, or from a pamphlet containing sketches and descriptions of several home-made bunchers which can be secured from the Saskatchewan Department of Agriculture, Regina, or from any agricultural representative's office. Now that there is more time for shop work, it might be a good time to develop one of these home-made devices and have it in readiness for the next harvest season.

Keeping Up With Varieties

AN excellent illustration of the extent to which field crop varieties are constantly undergoing improvement at the hands of plant breeders, is afforded by the variety Apex. This is a Saskatchewan spring wheat variety, first distributed in 1937 from a cross made ten years before, in which Marquis was one of the parent varieties.

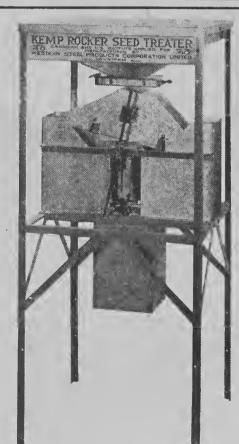
It matures about the same time as Marquis, but is highly resistant to stem rest, though susceptible to leaf rust. It is moderately resistant to bunt and loose smut. In baking strength and flour color, it classes with Marquis.

In yield, Apex has suffered by comparison with Thatcher, and as a result, work has been continued at the University of Saskatchewan in the direction of further improving this variety during the past ten years. Professor J. B. Harrington, Field Husbandry department, now announces a new strain of Apex (Sask. 2156), which was secured by backcrossing Apex with Marquis. This simply means that Marquis, having been one of the original parents, is crossed again with the new variety Apex. By this backcrossing process, a new strain, definitely higher yielding than the original Apex, has been secured, which also has stronger straw and is as good as or better than the original Apex in height and weight.

Dr. Harrington has indicated that the University did have a limited amount of seed of the new Apex, which is now completely exhausted; but the new strain looks promising if a test on field scale made just east of Saskatoon last summer, where it is not usual for Apex to outyield Thatcher, is a good indication of the yielding ability of the two varieties. In this test, seeded on May 4, in which three plots of almost three acres each were used, the new Apex (Sask. 2156) was compared with the old Apex and with Thatcher. Weighed at the elevator, after having been combine-cleaned, the yield of Thatcher was 42 bushels and 50 pounds. The old Apex (Sask. 1789) showed a yield of 47 bushels and 10 pounds, while the new Apex produced 53 bushels and 50 pounds.

Less than ten years after the original cross was made, the variety was first distributed. Five years after introduction, it was widely recommended throughout Saskatchewan, but within two or three years it was restricted to fewer and fewer areas owing to the fact that it would not equal Thatcher in yield. Now, at the end of twenty years, a new strain appears which is definitely superior to the old, and may even outyield Thatcher.





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Pasture Improvement Is Profitable

Mixtures are generally preferable to single pasture crops and fertilizer increases carrying ability

WESTERN CANADA is not particularly fortunate in the number and suitability of cultivated grasses, with which to build up high yielding pastures and hay crops, under our conditions of comparative drought and cold. However, there are very large areas in western Canada where soil fertility would be better maintained, and crop production increased, if more effective use were made of such grasses and legumes as are available.

Grass is regarded as the greatest natural resource of the country, and the pastures of a New Zealand dairyman are a pretty good guide to his financial standing, if coupled with the size of his holding and his herd. In Great Britain today, due to the influence of the war years that have led to an increased acreage of crops, it is evident grass in the rotation, grown as an intensive pasture crop, accompanied by heavy fer-tilization, has the support of outstanding British agriculturists.

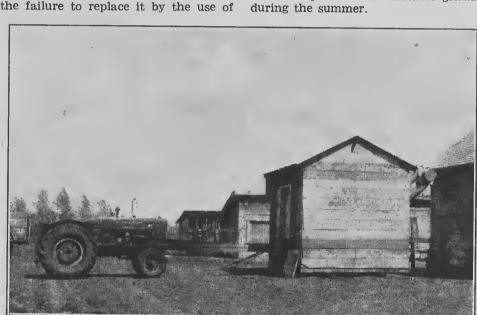
In western Canada, the natural fertility of much of our soil cannot be relied on indefinitely for profitable returns. Wheat, it is true, will be our mainstay for many years to come, in certain portions of the prairie provinces. If the fertility of our soils is to be maintained, we must introduce more and more grass and legumes, maintained as profitable crops. One reason why more progress has not been made in this direction, is because we have so many millions of acres of native grass or rough pasture. Our cultivated land has been neglected and tends to yield less than it formerly did. The introduction of commercial fertilizers and their application in western Canada is proof of the need for such increase in fertility. The using up of the natural organic material in the soil, and

tities were applied. As a result, some of the pasture experiments have given yields of more than 20,000 pounds, or 10 tons of green weight material from the use of concentrated phosphorus, as compared with one-half or one-third of that amount where no commercial fertilizers were used.

In western Canada, in areas where rainfall is heaviest, such as in parts of Manitoba and the northern fringes of the Park Belt, as well as in the valleys of British Columbia, this principle of generously fertilizing permanent pastures could well be followed.

The most popular pasture mixture on the prairies is a mixture of alfalfa and brome grass; and it is important to bear in mind that the yield of such a mixture is almost invariably greater than of either crop grown alone. The nitrogen secured by means of the alfalfa assists in developing a more nutritious brome grass, and the sod-bound condition, which is characteristic of brome grass after it is grown for two to five years, is largely prevented by the mixture with alfalfa. Furthermore, as pointed out by J. E. Birdsall, Supervisor of Crop Improvement in Alberta, the deep feeding system of the alfalfa makes it possible for this crop to obtain a portion of its food requirements from lower layers of soil than are reached by brome grass roots, so that competition between the grass and the legumes is minimized.

Another reason for the desirability of grass and legume mixtures is that they produce a most satisfactory feed at different seasons. Crested wheat grass. for example, starts growth in the very early spring and is again very useful for pasture late in the fall, whereas a legume, grown as a mixture with it, is more likely to furnish suitable grazing



[Guide photo.

The tractor has many farm uses. Here it is grinding farm-grown grain for livestock feeding on an Alberta farm

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grass and legume crops, is resulting in lower yields, weedier farms and greater liability to loss of soil from erosion.

Dr. E. S. Archibald, Director of the Dominion Experimental Farms Service, Ottawa, has pointed out that the establishment of a pasture of nutritious, succulent grass, expected to yield heavily throughout the season, is an entirely different matter from the establishment of hay sod. A pasture sod should continue to increase in carrying power for several years. This is more readily possible in eastern Canada, where a greater variety of grasses can be used in the pasture mixture, than in western Canada, but the principles underlying pasture building are the same. One of these principles, according to Dr. Archibald, is that, in the establishment of a pasture, heavy fertilization is essential. In some of the eastern pasture mixtures tried out, as much as 600 pounds of superphosphates, 100 pounds of potash, and 150 to 200 pounds of sulphate of ammonia have been used with more beneficial effects than where smaller quan-

Stop the Waste of Soil

WORD of warning has been issued A by the Manitoba Soil Conservation Committee as to the injury that has been inflicted on fields cleared from woods and now severely damaged by wind and water erosion. The Committee recommends that in the clearing and breaking of new land and wooded areas, narrow belts of uncleared native woods be left wherever the land slopes, so that cultivated fields will not be susceptible to water erosion. These strips would act as buffers between fields, and "will aid in the control of soil erosion, because it secures that cultivation will be done crosswise on the slopes." Where light lands are being cleared off, and the topography is smooth, it is also recommended that buffer strips be left at intervals so that loss of valuable top soil from soil drifting will be prevented.

Public consciousness of the loss taking place through wind or water ero-



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sion is very slowly but gradually being aroused. In many cases, the last people to become conscious of the need for soil conservation are the owners of the land whose capital is being wasted year by year. Today, ownership is regarded as giving the owner a right to do as he pleases with the land; to maintain its fertility and farm it well, or to let it grow into weeds and waste away through erosion. Eventually, as society takes a more enlightened view of what is a primary resource of the whole

community, ownership will come to mean the right to occupy a piece of land and to pass on this right to the owner's heirs or successors, only as long as the soil is conserved as a national resource. England has today reached the stage where, within the last few weeks, the government has taken the right, under extreme circumstances of misuse and abuse, to take the land away from an owner who has evidenced a lack of capacity or an unwillingness to use the soil properly.

POINT TO BIGGER POULTRY PROFITS In southern Alberta less fallow may mean less soil drifting and water erosion

MOST of the farming area in the prairie provinces has been forced to develop a type of farming based primarily on a comparatively limited amount of moisture. This in turn led to a very short rotation, which in the driest areas where wheat only could be expected to be profitable, became a two-year rotation of wheat and summerfallow alter-

In the major portion of the prairies, the commonest rotation is one year of summerfallow and two years of grain crop. Here and there in recent years, individual farmers have questioned the value of summerfallow and have been attempting to adjust their land use to systems of farming which would prevent any considerable portion of land from lying idle one year out of each two or three.

Now comes the Dominion Experimental Station at Lethbridge with the argument that unnecessary summerfallow is dangerous in areas liable to soil drifting, and points out that even in areas of low rainfall where it is not likely summerfallow can be discontinued, every protection for the fallows must be afforded by strip farming, trash cover, lumpy surface and listing. The station also suggests that in areas where there is more rainfall, the fallow acreage can probably be reduced with advantage. At the station itself over a period of 35 years the average yield per acre has been the same on a

fallow-wheat-wheat rotation, as where summerfallow and wheat rotate on a two-year basis.

It is pointed out that at the Pincher Creek substation, not only soil drifting, but water erosion has been greatly reduced by keeping less of the land in fallow, until in 1946 the fallow acreage was only 60 acres out of a full section. At this substation, land is fallowed only when conditions of moisture and weeds warrant it, and the acreage in hay and pasture correspondingly increased. In the foothills area, cover crops are seeded on fallow, which originally came into use to prevent soil drifting, but which now have a very important pasture value. Lethbridge Station authorities sum up the fallow situation as follows:

"The reduction of the fallow acreage is of definite importance in soil conservation. It means that each farmer will have to study conditions as he finds them, including soil, moisture, insect pests, plant diseases, and plan his farming practices accordingly. In many districts, an increase in livestock is justified, and this would necessitate more land in hay and pasture.

"Soil conservation is of first importance. Depletion of good farm land by wind and water erosion must cease, and it is obvious that one of the factors that is going to play an important part in this development, will be the reduction in the summerfallow acreage."

Have Sunflowers a Future?

Product of the war years, sunflowers as a crop of the future need new varieties and graded payment based on oil

GROWERS of sunflower seed in southern Manitoba would give quite a lot to learn the future of the sunflower crop, in advance. In the year 1943, the first year in which any special attention was given to sunflowers as an oil crop for war purposes, the acreage devoted to sunflowers in Canada was 12,370, all of

which was in the three prairie provinces. Of the total, Alberta grew only 500 acres, Manitoba 4,270 acres, and Saskatchewan 7,600 acres. In 1944, a total of 17,300 acres was grown in Canada, of which Manitoba grew 11,300 acres, and Saskatchewan 6,000 acres. In 1945, Canadian acreage was reduced to 14,216, of which



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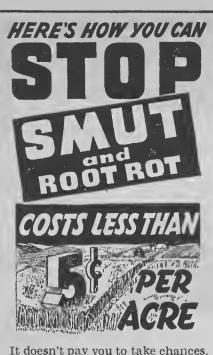
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Due to the extreme scarcity of oils and fats throughout the world, the acreage objective was fixed last year at 28,000. Manitoba kept up her acreage to a figure of approximately 16,000 acres, but as far as The Country Guide has been able to ascertain, not a single field of sunflowers was planted last year in the Province of Saskatchewan. There is reason to believe that the acreage in Manitoba could be stepped up to 50,000 or more, if the market outlook were favorable and growers were given some assurance in advance that the present fixed price of five cents per pound for No. 1 Canada Western sunflower seed would be maintained, or roughly approximated in the future. There are those, however, who expect that the present extreme shortage of fats and oils will not last, and that at some time within the next two or three years, there may well develop a surplus of these fats.

With the establishment in Manitoba of a co-operative oil processing plant at Altona, growers in southern Manitoba, particularly within a radius of 50 miles of Altona, can in all probability grow sunflowers much more profitably than if they were dependent, now and in the future, on shipment to outside points for crushing. At the moment there seems to be an eager market for all and more oil than the plant can produce with its single expeller, which will take care of the product of approximately 22,000 acres, or approximately 18 million pounds of seed per year, operating at 60,000 pounds daily, which is considerably more than rated capacity.

There is reason to believe, however, that if producers of this crop are to grow it most profitably, and to be placed in a position to meet, to the best advantage, whatever postwar competition may develop, some changes in the grade standards for sunflower seed must be authorized. Until recently, the varieties grown have been Mennonite and Sunrise, the latter averaging perhaps 700 pounds yield as compared with around 1,000 pounds for Mennonite, but having a higher oil content. The price for number one seed of both varieties has been the same, namely five cents per pound. Recently, however, there has been developed at the Forage Crop Laboratory, Saskatoon, a new hybrid named Advance, which is claimed by authorities at the Altona oil plant to yield in the neighborhood of 1,200 pounds per acre and to produce an oil count seven per cent higher than Mennonite. The situation has developed, therefore, in which the processing of Mennonite is more or less unprofitable, and we understand an approach is being made to the Board of Grain Commissioners, looking toward a revision of the grade standards in order to encourage production of the higher yielding and more profitable hybrid, Advance, which in turn may well be superseded within a few years by other and newer varieties of still higher cultural or processing potentialities.

The sunflower crop thus illustrates again the fact that a crop introduced into an area and grown in very small quantities for farm consumption, may become adapted to large areas and important commercial uses. The original Mennonite sunflower, which was a strong growing plant of mixed breeding, was first thought of as suitable for silage purposes in the West. Sunrise was developed for this purpose at the Dominion Forage Crop Laboratory, Saskatoon. Now, however, sunflowers have emerged as an oil crop which has an assured, short-time commercial future. What its long-time position will be must be determined by the economy with which it can be produced under peacetime conditions.

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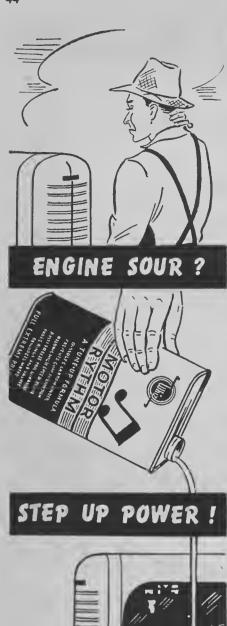
WRONGLY used, the one-way often causes great damage to soil and crop. Pulled too fast, it breaks down the structure of soil, pulverizing it too much. Soil so damaged is liable to blow, and often requires special clod-building operations to restore a degree of structure that will hold down drifting. Run too deep, the one-way buries the stubble; or if too fast, throws it loose on the surface—worthless either way to stand guard against wind.

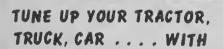
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RUST PROOF?

Continued from page 7

yield-reducing powers that stem rust has, at least in the areas where spring wheats are grown, and consequently the appearance of these new strains is a matter of relatively minor importance. Nevertheless, it is highly disconcerting to find that any rust of economic importance should show such ready powers of adjusting itself to resistant plant varieties.

OATS is another crop that in years gone by has been subject to severe damage from rust. Two different rusts attack this crop, stem rust and leaf rust—the latter commonly referred to as crown rust. Of the two rusts, stem rust usually causes the most severe damage. In recent years, a number of stem-rust resistant varieties have been produced in the United States and Canada.

The first of these, variety Vanguard, was distributed to Canadian farmers just nine years ago. At that time nearly all oat-stem rust in Canada belonged to one or another of three physiologic races, namely, races 1, 2, and 5. Other races numbered 3, 4, 6, 7, and 8 were found very occasionally. Of these eight races only the rarely occurring races 4, 6, and 8 had the ability to rust Vanguard severely.

In 1943, six years after its distribution, Vanguard began to show considerable stem rust infection in districts where it was widely grown. A study of the rust showed that this infection was caused by the previously rare race 8. Since that time this race has annually gained in prevalence especially in regions where Vanguard and similar varieties are commonly grown. The consequence is that these varieties can no longer be regarded as resistant to stem rust although, being resistant to a number of races of the rust, they do not rust as severely as the older varieties.

WHEN rust-resistant varieties were first distributed it was often assumed that through their production the rust problem was solved. The information already presented shows that this is not necessarily true. The cereal-inhabiting rusts have shown that they possess an enormous variability which confers on them correspondingly great powers of adjustment to the cereal hosts on which they grow. Although these powers of adjustment appear to be greater than many people anticipated there is, nevertheless, no reason to despair. Fortunately, the cereals, wheat in particular, show equally great variability and it is this variability that should enable the plant breeder to keep one or two steps ahead of the rust.

To ensure success, however, two things have to be done. First, the plant pathologist concerned with a study of the disease must conduct careful surveys to locate new rust strains whose presence might spell danger to the rust-resistant grain varieties. Second, the plant breeder must develop varieties that will withstand the attack of such rust strains in case they should become prevalent. It is here that the great variability of a plant such as wheat becomes of enormous value. Among the thousands of types of wheat that exist in the world there are almost certain to be some that show resistance to a new strain of the rust. Such wheats may be of little value in themselves. except for their particular type of resistance that can be built, by breeding, into a new variety with the requisite quality.

The search for new and resistant

varieties is easier now than in former years, thanks to the spread of science to the far corners of the earth and thanks also to the international brotherhood that exists among scientists of all nations. For it is an unwritten law that one plant breeder or agronomist will furnish another with his varieties free of charge even if the nations to which they belong are not on the most friendly terms.

Some of the problems posed by the recent appearance of new rust strains are already well on the way to solution. Oat varieties have been produced, in Canada, though not yet distributed. that show high resistance to all known races of oat stem rust. Wheat varieties are now in the making that show promise of combining satisfactory resistance to the virulent stem-rust race 15B with resistance to the leaf-rust races that have recently rusted Regent and others of the new wheats.

Plant breeding will unquestionably remain the chief method of combatting rust; but there are other methods that may yield fruitful results. Perhaps the most important of these is that of eliminating the so-called "alternate hosts" of a rust where that is possible. The destruction of the alternate host of a rust (barberry is the alternate host for stem rust, buckthorn for crown rust of oats) results in the elimination of the sexual phase of the rust—the phase in which new physiologic races are principally produced.

N the case of stem rust this would Involve eradicating the common barberry and any other susceptible species of that plant. Great progress has already been made in barberry eradication in the chief cereal-producing regions of the United States; and in the prairie provinces of Canada such barberries as existed have been destroyed. In eastern Canada, however, barberries are widely distributed, particularly in certain parts of Ontario, and their eradication would undoubtedly involve very considerable expense. Whether or not their destruction is practicable can only be determined on the basis of an adequate knowledge of the extent of their distribution. If they were destroyed the result would unquestionably be a decrease in the number of physiologic races present in that area in future years.

There is, indeed, good evidence that the destruction of barberries in the central parts of the United States has already reduced the number of wheat stem rust races in that area and the adjacent Canadian prairies, where fewer races are now collected each year than formerly. It may well be that the destruction of the barberry in Canada will sooner or later have to become a part of long-term policy towards rust

As far as the near future is concerned, it is the present policy to develop cereal varieties resistant to dangerous races now appearing on the horizon even if these races have not yet gained wide distribution or importance. It is only by vigilance of this sort that we can ensure ourselves against being caught unawares by a sudden coming into prominence of one or another of these strains of the rust.

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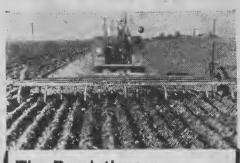
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HORTICULTURE



The apples came off the tree alright, but Thomas Scaife, Marquette, Man., picked them just before, rather than just after the snowstorm.

Just A Little Faking

THE picture herewith is an unusual one of myself and extreme weather conditions of the spring and fall of 1946. The early warm spell brought all the fruit trees into flower too early, then the extreme frost caught a good many varieties in flower. I had a fair crop of plums and cherries and some apples. The apple tree in this picture produced three baskets of apples: The last basket which I have in my hand was picked

so near the date of this snow storm I couldn't resist having my picture taken by this hardy tree. It was loaded so heavily with apples, I had to place sticks all around the tree to save the branches from breaking down. I don't know the name of this variety, but it surely stands up well under these extreme weather conditions. I am sending this picture in hope that it will keep up the courage of your readers who have started with tender varieties. Thomas Scaife, Marquette, Man.

Prairie Fruit Men Study Winter Injury

Fruit and vegetable garden problems studied during two-day meeting of Western Canadian Society of Horticulture

O one has a perfect understanding of winter injury and its many forms. It has been studied for at least 300 years, and a number of different theories have been advanced from time to time.

The whole subject of winter injury was prominently featured at the annual meeting of the Western Canadian Society of Horticulture held in Winnipeg, February 15 and 17. A committee of the Society has spent a great deal of time during the past year in bringing our knowledge of the subject up-todate, and as was pointed out by P. D. Hargrave, Superintendent of the Provincial Horticultural Station, Brooks, Alberta, who was chairman of the committee, the literature on the subject already involves several thousand items. From this literature, it appears that the cells of a plant may be injured in several different ways, but more exact knowledge is essential if scientists are to learn exactly what must be done to overcome this hazard. Already scientists have been able to achieve, by selection, types of plants which will resist cell injury, but the nature of the types of injury which cause the most damage is still a subject of considerable specu-

It is known that the food supply of plants bears an important relationship to possible winter injury, and for a long time it has been known that the balance between the supply of nitrogen and other nutritive substances, as well as water, is very important at certain scasons of the year. This is particularly true in the autumn when the plant is preparing for the winter dormant period, as pointed out by Dr. R. J. Hilton, of the University of Alberta. The difficulty of obtaining thorough knowledge of winter injury is due in part to the fact that it takes several forms, of which sun scald is a very common example. Injury may also occur to the branches, twigs and fruit buds, or to the trunk and crown, or to the crotches of trees. Likewise, such injuries may dispose trees and plants to attacks by fungus diseases, and the

problem of the scientist has always been to seek first causes, which are generally to be found in environment. In general, an excess of nitrogen is to be avoided late in the season, but aside from the desirability of securing normal growth, and early ripening and hardening of the wood for winter, little specific information of a nutritional character bearing on this problem, seems to be available.

The fact that named varieties of tree fruits are usually budded or grafted on root stock of a different character makes the relative hardiness of trunk and root systems of much importance. It has been suggested, with comparatively little clear proof, that a tender variety may become somewhat hardier when topworked on another hardier variety, than if worked directly onto a hardy root stock. The method, however, does not alter the fundamental reaction of the tender variety to winter

F. V. Hutton, Superintendent, Dominion Experimental Station, Prince George, B.C., reviewed a number of studies on stock and cion relationships, but without conclusive evidence that this relationship has been sufficiently studied as yet by anyone.

OUR practical knowledge of protection against winter injury, as applied to conditions in the Prairie Provinces, was reviewed by Dr. C. F. Patterson of the University of Saskatchewan. Dr. Patterson emphasized the known fact that plants not only possess various degrees of hardiness, but that this hardiness is influenced to some extent by environment. The maximum hardiness which a variety possesses, usually accompanies fully matured tissues and complete dormancy, as well as full maturity by the time the cold weather period is reached. It achieves maturity by a gradual reduction of the amount of moisture available to the plant. This moisture reduction automatically reduces the food supply and therefore slows up growth. High temperatures during September and

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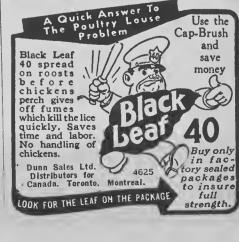
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OTTAWA MFG. CO., 348 Brish Ave., Oltawa, Rass., U.S.A. October are likely to be dangerous and retard maturity. Ideal conditions involve a gradual reduction in temperature from early September until midwinter, and a gradual increase in temperature from then on until spring.

Much so-called winter injury to the tree itself is due to cold, but some of it arises from drought. This may be due in part to dry weather during the growing season and its weakening effect, or to actual drying out during the winter, when the moisture given off in cold weather may not be replaced from the roots.

Obviously, a first precaution is to use only the hardiest varieties for planting, and to grow fruit in a sheltered area, which in very cold districts, should be sheltered on all four sides. In dry areas, crowding must be avoided by wider planting, so that the maximum food supply may be available. Clean cultivation early in the season will encourage growth, but if continued too late will delay dormancy and maturity of the wood, thus encouraging winter injury. In northern districts, cultivation should be stopped quite early in the season, and it may be advisable to sow a cover-crop in July or August to use up some of the excess moisture and discourage further growth. Late summer or fall pruning may also be injurious by delaying maturity, while fertilizers applied later than May might have the same effect. Where the late fall moisture supply is low, irrigation just before winter sets in will help prevent winter drying; also, because trunks are less resistant than small branches, low heading is preferable. Wide-angled crotches are to be preferred, since tissues in such crotches mature earlier. Similarly, overbearing should be discouraged, since very heavy crops tend to increase winter injury. Two inches of straw applied late in the fall may also help to prevent root injuries, because roots are generally less hardy than the tops.

Finally, severe pruning of winter injured trees is to be avoided. Overpruning will cause the death of some trees that could be saved. Aside from the removal of dead branches, and the painting of all wounds over 1½ to two inches in diameter with a mixture of, say, white lead and lamp black (to give greyish color) only light to moderate pruning is advisable.

THE Western Canadian Society of Horticulture was originated in 1943 and consists principally of men engaged in scientific work at prairie universities and experimental institutions. Their common object is the advancement of prairie horticulture, and the exchange of knowledge and ideas. There are also a considerable number of associate members of the Society who are growers, nurserymen and others intimately associated with prairie horticulture. One of the primary purposes of the Society is to achieve the maximum amount of co-operation between the existing experimental institutions, and to co-ordinate the horticultural work of these institutions as much as possible. For the last two or three years, the Society has been very anxious to help bring about an enlarged fruitbreeding program, so that hardier fruit varieties of better quality can be offered to the public. Improvement in vegetable varieties is also sought, and it may be that through the co-operation of the Dominion Experimental Farms Service at Ottawa, with prairie institutions, a plan of this kind can be put into operation this spring.

Study of plant chlorosis (yellowing of the leaves) has also been made by a committee of the Society, and it is hoped that some experimental work may be undertaken this year. Likewise, a committee has been studying methods of rodent control, especially of rabbits, and it is expected that ex-

perimental work in this direction, also, will be carried on this year, particularly at the Dominion Forest Nursery Station, Sutherland, Saskatchewan, and at Morden.

A very interesting feature of the Winnipeg meeting was an address by M. B. Davis, Dominion Horticulturist, who last summer visited fruit breeding and experimental stations in Europe. Mr. Davis was able to illustrate by colored slides some of the excellent work being done at stations in England, Sweden and Denmark, and to give those present a great deal of information useful in their work. The members also benefited from talks on fruit breeding by A. W. S. Hunter, Central Experimental Farm, Ottawa, and by W. R. Phillips, Ottawa, in charge of storage and freezing of fruits and vegetables.

Research for satisfactory varieties of vegetables for the prairie provinces is still going on, and the recommendation of the Vegetable Committee was accepted. It called for specialized efforts at selected experimental stations to secure new varieties of tomatoes, sweet corn, onions, cucumbers, pumpkins and squash, which will better meet the conditions imposed by our prairie

The next meeting of the Society will take place at Saskatoon; and Dr. C. F. Patterson, of the University of Saskatchewan, who was President in 1946, was again elected to this office. The Secretary is C. R. Ure, Dominion Experimental Station, Morden. It is expected that the report of the Winnipeg meeting will be available in about two months (\$1.00 to non-members).

Permanent Plant Labels

ONE of the best plant labels I have tried is by far the simplest I have seen. A bit of galvanized sheet metal is cut to the desired size, and the lettering is written in with ordinary lead pencil. As long as this label is kept off the ground, it should remain legible for many years.

As an example of the durability of the combination, fifteen years ago I made some lead pencil sketches on the galvanized steel body of a threshing machine. During that time the machine has been outdoors constantly, yet the sketches still look fresh enough to have been the work of the past season.-Walter Schowalter, Hayter, Alta.

Trees Should Be Well Spaced

IT is well to bear in mind the importance of distance between trees when planting trees of any kind. When a tree grows alone in good, well-drained soil, well exposed to sunlight, it reaches its full stature and develops its true natural shape. When planted with other trees, its shape, size and habit of growth may be altered as the result of lack of sunlight and fertility, due to close planting. Trees planted too closely together tend to grow more in height (reaching for the sun) and to lose their lower branches.

This is why too close planting of fruit trees is a mistake. Individual trees cannot reach their full size, and in many cases are unable to develop enough leaves to maintain healthy fruit and develop frequent good crops. Sometimes it makes for easier and more convenient cultivation to have the distance between rows greater than the distance between the trees in the row. Actual distances, however, should vary with the soil, moisture, soil fertility and the variety. Since the root systems of trees extend farther out from the trunk than do the branches, ideal planting distances are those which will permit the individual trees to become mature and reach their full height and width, with some space left between them and adjoining trees in the row.

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WHAT FUTURE FOR WOOL?

Continued from page 8

COMING into the storage room unscoured and dirty with manure, sand and dirt, the wool appears as a 300 gram sample from shearling fleeces mostly, made up of 50 to 60 small lots. Different portions of the fleece, taken after the tags and the hairy and face pieces have been taken out, each sample is bagged and weighed. The fleece itself is weighed into the storage room. Paper bags are used for storing the samples, but before scouring, the sample is weighed again, owing to the influence of humidity on weight.

The second room is a fleece breaking or dusting room, where a machine designed by Dr. J. F. Wilson of the University of California is in use. Here the sample is broken up, and the matted portions (25 to 30 per cent, depending on the breeds) are screened out along with the dirt. The good wool is shredded and opened up, and later carried by wind blast into a glass-covered cage. The sample is then gathered and weighed and the machine cleaned before the next sample is broken.

From this machine, the sample is placed in a laundry net in preparation for the scouring process, which involves the use of five tubs held at different temperatures and carrying different solutions. The tubs are arranged in units and are electrically heated, with thermostatic control. The solutions consist of various combinations of washing soda, water and soap. The wool itself is held on a screen, while the dirt settles after being removed by the solution, aided by gentle agitation. Between each two tubs the wool goes through a wringer to help force out the dirt by the flushing action of the wringer.

After the fifth tub, the wool is spread on a second rack in preparation for the drying room. The identity of each lot is maintained by a small square of cotton which stays in the bag during the scouring process, and is taken out when samples are put on trays. The trays are placed in a drying cabinet holding 56 samples on 28 trays. Temperature is maintained at 150 to 160 degrees, and is thermostatically controlled. This, however, is only a preliminary drying, and the samples are left in the cabinet until the final or conditioning oven is available.

This conditioning oven brings the wool down to a condition of absolute dryness. The samples are carried in 40 baskets. Electrical heating units in the bottom of the oven bring the temperature up to about 220 degrees Fahrenheit in 45 minutes; and three hours

later the wool is dried to a constant weight. Small fans operating inside the cabinet keep the air circulating, while an exhaust fan cuts in as necessary to let out the moisture laden air and allow fresh air in. When the samples are finally dried, they are weighed without removing from the cabinet by means of a scale on top and a thin aperture through which the operator fishes with a hook and brings the basket handle to a place where it can be hung on the scale.

With this final weight of free, dry wool, it is then possible to compute by a series of 15 calculations, the final net yield of clean wool, fleece by fleece. This yield varies, of course, according to season and by breed as well.

UPSTAIRS, the wool fibres are then measured for fibre diameter. This is done in a dark room where a microprojector arrangement, designed by the National Research Council, throws a reflection of the fibre from a mirror onto a screen. From 200 to 600 individual fibres are measured from each fleece and their diameters averaged. There is a great deal of variation, apparently, in fibre diameters, but what the research men are looking for is not only correct diameter, but uniformity. There is some variability in different parts of the fleece, and there is also a variability within the staple. The wrinkle in the Ramboulet, according to Dr. Rasmussen, always shows a coarser fibre on the top than in the smooth part of the valley.

Before projection on the screen, however, the sample must be prepared for the purpose. It is first necessary to get a representative sample of the full sample from the fleece, since any single fibre might be from, say, the shoulder. Consequently, a number of random fibres are taken and mixed. To measure diameters it is also necessary to have an exceedingly thin section of the fibre, for which purpose a sectioning device is used. When the extremely thin cross-section is finally obtained, it is placed on a small slide of clear glass and prepared as any other slide to be used under a microscope.

This laborious, careful and routine work of testing fleece weight and fibre diameter is fundamental to wool improvement. Fleece weight, uniformity of wool quality throughout the fleece, as well as fineness of wool, are obviously matters of breeding, production and management. Breeders, feeders, nutritionists and managers must work closely together, and only by the careful observation and expert testing of thousands of samples, followed by a careful analysis of the data thus accumulated, will it be possible to bring together the practices essential to the production of profitable fleeces in high quality wool.



[Guide photo.

The new Wool Research Laboratory building at the Dominion Experimental Station, Lethbridge.

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Only one thing is new in that headline. International Harvester and the IH dealers have been doing their level best for generations in the interest of Canadian agriculture.

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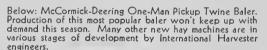
Every farm operator knows that the Harvester Company has perfected many new products, competently engineered and tested, fully qualified to take to the fields. . . . Our problem now is to turn them out in quantity production for our thousands of customers, from long established plants and from many new factories. Our hope for this new year is to keep assembly lines running without interruption until every man's need is satisfied.

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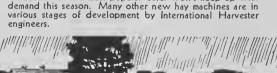
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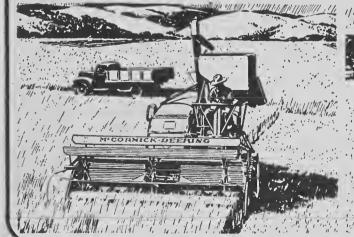
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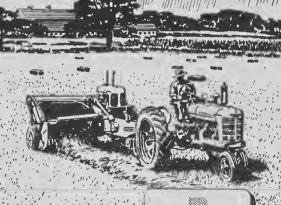


on the contour.





Below: McCormick-Deering 123-SP Self-Propelled Combine. Other coming International developments: smaller combines, 2-bottom, 2-way plow, sugar beet harvester, tractor touch-control, whirlwind terracers, milk coolers, home freezers and refrigerators.



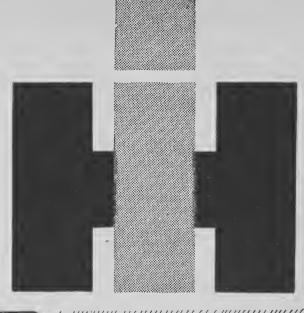


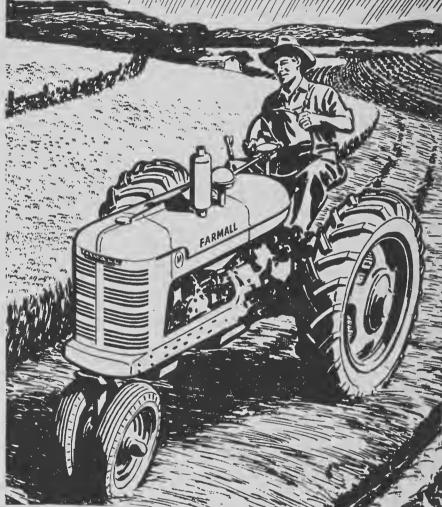
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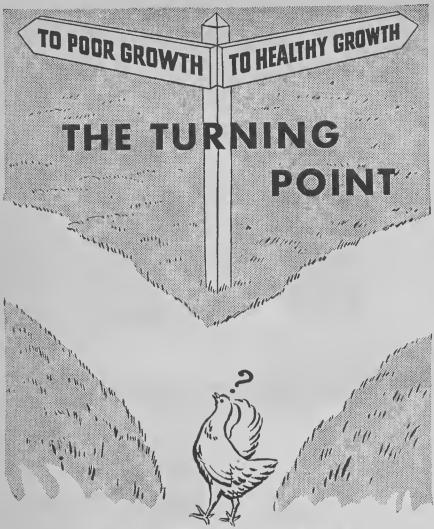




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Below: The New International No. 24 2-row Tractor-Mounted Corn Picker. Coming International machines include new 1-row corn pickers and cut-off corn pickers. Spreader for fluid manure, and tractor-operated power loader, now available.



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The Big Blizzard

The winter of 1947 will go down into history

'T is safe to say that the storm of February 6 to 8, 1947, compares with the worst in pioneer legend. Numberless stories could be collected to show the hardships and dangers to which farm folk were exposed during this storm and the fine qualities they displayed in combating it. The Guide does not propose to make any such collection, but wishes to put on record one experience contributed by Thos. Jenkins, Kelwood, Man.

"After listening to the radio report of February 16," says Mr. Jenkins, "about a farmer in Saskatchewan whose hen house was so drifted over that he had to feed his birds through the ventilator, I decided to write to let you know what happened to us here.

"On Thursday, February 6, it started to snow and blow about 11 o'clock in the morning, gradually getting worse all day. It continued unabated through the night, the wind blowing about 40 to 50 miles an hour with snow falling continuously. When we got up on Friday morning the storm was so bad that we could not see our buildings. We were not able to get to them all day Friday. We tried to get across the yard but the snow and wind were so bad we could not keep our eyes open and it would smother a person. We were not able to get to the stable to feed our stock nor to milk the cows which were giving us a pail full of milk each.

ON Saturday the 8th it got a little better by 11 o'clock. By this time the snow had piled around the buildings up to the roofs, and in some cases five or six feet on top of the roof. On Sunday afternoon I dug down to get to the hen house door to get it open. Upon reaching the level of the bottom of the door, I got out my rule and measured a twelve foot depth of snow from the top where I had started to dig. The hens had not had anything to eat nor seen daylight since Thursday. They were laying before their long night began but have now all stopped.

"On Saturday just before noon we got a ladder up to the stable loft and got to the cattle and horses. We got through a window into another shed where there were some dry cattle. Three of our neighbors came to help shovel snow so we could get the rest of the stock fed. By four o'clock Sunday we had the snow shovelled away from the stable door so we could get the horses and cattle out to water, the first drink they had had since Thursday morning.

"We now have snow around our yard in some places eighteen feet deep. We are cutting it with the ice saw in big square blocks weighing perhaps half a ton, prying it on a sleigh and hauling it away. While the snow is unevenly distributed in great drifts, there is no place in the barnyard clear enough to permit turning a team and sleigh around. We cannot get at feed stored near the buildings. We have a hay stack near the end of the stable which is completely buried with about eight feet of snow on top of it. It will take days for two men and a team to haul away enough snow from around this stack to get at it.

"We had two big storms this winter beforehand which had filled up our yard badly with snow, but this one completely put a stop to movement. We have been on this place for twenty-six years, but have never seen anything like this before."

The lowest official temperature during the storm was ten below, recorded on the first day, and the highest, eight above, reached on the last day.



1947

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The Poultrykeepers Responded

well to the Government's call for early chicks. We're pretty well sold out for March but we may have some odd lots available and suggest yon contact us soon for New Hampshires, L.S. x N.H. and Black Australorps. Right now we've day-old and started cockerels, and a limited quantity started chicks and pullets. If you want chicks for later on in Spring, be sure to order them now.

BRAY HATCHERY 1441 Pacific Ave. Brandon, Man.

POULTRY

Conducted by Prof. W. J. RAE, University of Saskatchewan



[Univ. of Sask, photo.

Prof. W. J. Rae illustrates the method of drawing a blood sample for the agglutination test.

Turkey Markets

HE turkey prospects for 1947 are a wee bit mixed up. Some believe that there will be unlimited outlets for all the turkey meat we can produce, while others feel that the peak demand has passed. Last season there were all too few turkeys in Canada. The domestic demand was so strong that several carloads of turkeys were imported into this country from the United States for the Christmas market. All grades and all weights found a ready sale at good prices. There was no discrimination as to weight.

In the United States the heavy turkey sold at a discount of as high as 20 cents a pound on some markets. It would seem that Canadian turkey growers ought to heed this trend. If any difficulties arise in the selling of turkeys this fall it will be the big one that may be the first to feel the effects. The family turkey is a bird from 10 to 14 pounds and this weight will always find a sale provided the bird is plump and well finished. If meatless Tuesdays and Fridays go by the boards, turkey meat sales will suffer. Of course there is the British market. This will be our greatest hope if we find ourselves with a surplus of turkeys in 1947.

It is reasonable to assume that production will be greater in 1947 than in 1946, especially in Ontario, Quebec and British Columbia. From these areas should come the turkeys to supply the large markets of Montreal, Toronto and Vancouver. In former years prairie turkeys were sold in these markets. The problem which may arise is where will western turkeys be sold this fall? The best answer might be that they will be exported. If so they must be grown, killed and packed before the third week in November. This means earlier hatching, better feeding during the summer and more attention to fall finishing. If the prairie turkey grower can make these adjustments in his production program there is reasonable assurance that all the turkeys we can grow can be profitably marketed this fall.

Selecting Turkey Breeding Stock

THE physical selection of breeding stock has become a very essential part of our turkey business. There is evidence to show that possibly some breeders have over-emphasized meatiness, since the problems of egg production, fertility and hatchability are becoming really serious.

It should be possible to produce strains of turkeys with meat quality along with the ability to reproduce. To

do so means that more attention needs to be given to the quality of balance in the selection of breeding stock. In some strains of large meat-type birds there is a tendency to "front heaviness." A bird that tips forward as he walks ought to be discarded from the breeding pen. A bird that carries its body at an angle of 40 to 45 degrees is more balanced and approaches more closely the type best suited for the breeding pen. A good type turkey has a long even keel, nearly parallel to the back. The breast meat should be thick and of uniform width carried well back between the legs. Avoid the wedgeshaped specimen, whose point of keel is too far back and has extreme width in front tapering to a point at the rear. Check the head also. Look for a refined head with broad skull and a large, bright, alert well-placed eye. Try to avoid birds with weak or coarse heads.

Brooding Tips

NOW that more turkey poults are being hatched in commercial hatcheries and shipped out as day-olds to turkey growers, more attention needs to be given to brooding. A brooder house is a must. Buildings 10x12 feet or 12x12 feet would make ideal brooder houses. Such a building will brood 150 to 200 poults without fear of overcrowding.

Some form of artificial heat must be supplied. This may be either a coalburning or an oil-burning stove. The former is cheaper to operate, but not nearly as convenient as the oil burner. Start the stove a week before the poults arrive. When the house is warmed up, scrub it thoroughly with a solution of boiling lye water. Use one ounce of lye per gallon of water. Regulate the stove so that the temperature is holding around 95 to 100 degrees near the floor at the edge of the canopy.

Some growers like to provide a sunporch. This porch is the same size as the brooder house and has a floor of 1½-inch square slats or 1x2-inch mesh 16-gauge wire. The sides and top are constructed of lighter materials. Such a porch can be used in conjunction with the brooder house until the poults are 12 to 14 weeks of age. After this age the poults should be moved to larger pens or to a good green grass or alfalfa pasture. There are some troubles in brooding such as crowding into the corners or piling up under the brooder, but if the proper temperature is maintained and the corners of the brooder house blocked off, these problems can be reduced to a minimum.

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KATRINA AND THE STAMPEDE

Continued from page 6

with unseeing eyes at the sunset. Their gaze instinctively turned westward as though to penetrate space through bush and beyond the river as far as the bright new highway itself. The highway that their father had helped to build and which would so greatly facilitate the settlers' living. They had every right to celebrate! Janis looked away from them as a speck of an idea —an absurd, preposterous idea grew in her mind. She shrugged and tried to brush the thought aside as she would a mosquito but it returned to buzz round and round.

"I think that I know how we can go." Her voice sounded thin and uncertain.

Carol and Don leaped to their feet to face her trembling with expectancy.

"I'm not sure that it's a wise decision but-maybe we could take the

 T^{HE} sun was rising round and red and promised a hot day when Janis took her place on the wagon-seat and picked up the reins. Now that their great adventure was commencing a hundred doubts pricked at her. They were so impoverished, so shabby! Yet the children seemed utterly unaware of their newly washed but still ragged overalls and their faded shirts. Carol's golden curls made a shining halo about her happy face where she sat on the neatly folded blankets and tarpaulin while Don dangled his bare feet over the end of the wagon and talked soothingly to Katrina secured to the end of the rope he held.

The Webster place was deserted when they drove past, the door closed, the poplar-pole gate raised and the hens left to their own resources within the wire-run.

"They haven't got much of a start on us," Don declared. "I can hear the creak of their wagon."

Occasionally when the bush fell away from the rough, stony road they could glimpse the moving party barely two miles ahead. But the Websters' progress was not impeded by a slow-gaited cow and as the day wore on the distance between the two wagons widened.

Yet nothing could dampen Don's and Carol's happiness, and seeing their joy Janis pushed her worries away and resolved to enjoy the trip also and face trouble when it met them. The bay team pulled lazily at the wild oats growing along the way, bees bounced from the dark cushions of the blackeyed susans, and brother and sister both took turns gathering great armfuls of wild daisies to feed Katrina from the rear of the wagon and keep her in motion.

It was late afternoon when Janis caught sight of the silver sheen of the Peace River and her heart began to thump in trepidation at the prospect of crossing. Nine hundred feet the banks reared at either side of the river, and the descent must be made tonight! After a night's rest they would face the fording and climb on the other side. Four years ago on their way in to the homestead the children had been too young to grasp the full danger of this crossing, but now as they slowly approached the crest that seemed to abruptly fall away into space, they sobered and looked to Janis for guidance.

"You two must take Katrina safely down," she told them. "I'll wait here until I see that you've reached the river's edge and then I'll take the team down." She cleared her throat nervously and pointed to what appeared like the

faintly defined marks of their neighbors' wagon-wheels. "It looks as though the Websters went down here. You'll be all right. Carol, you walk directly ahead of Katrina, and try to hold her back. Don, hold tightly to that rope—don't let Katrina get away and start falling, whatever you do. Then when you get to the bottom-keep out of my way!"

She tried to keep her tone light and carefree—she even managed a smile as they started cautiously down the steep bank. Her heart stopped every time she saw Carol's feet begin to slide or heard her warning about — "Watch here. Don!" And twice when Katrina appeared to lose her footing and threatened to carry both youngsters with her in a headlong plunge into the river, Janis had to cover her mouth with her hands to hold back her frightened outcry.

She breathed normally again only when she heard their triumphant shouts and caught the agitation of their upraised arms when they reached the water's edge without mishap. All that remained now was for her to get the team and wagon down beside them in an upright position!

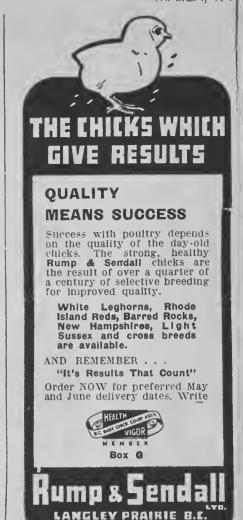
Janis wrapped the reins tightly about her wrists and took a stance behind the seat where she could brace her body, then quietly urged the bay team forward. The horses had as little liking as she for the treacherous descent and moved slowly, placing their heavy feet carefully, but once the slant of the hill tilted the wagon against their flanks they were carried forward against their will at an alarming rate of speed. Janis, her body bent like a willow over the seat clung desperately to the reins and above the rattle and thunder of their noisy race heard the screams of her children. After what seemed like an interminable time she noticed the river rushing up to meet them and the next moment was drenched with cold spray. When she could see again Don and Carol, each with a horse by the head, were white-faced and silently leading the team back to dry land.

THE first thing Janis noticed when she leaped down from the wagon to firm ground once more was the serene, contented look on Katrina's face as she munched lazily on a long strand of grass. Katrina, the only unruffled member of the party. Janis began to laugh, and Don and Carol looking at her laughed too in sheer relief.

A breeze coming down the pathway of the river brushed the mosquitoes away, and long before the full moon climbed over the steep hill to touch the water the children were asleep. Janis, lying on her blanket in the wagon, gazed up at the far-away sky and wondered about Hal. There was nothing like poverty to embitter a man-nothing like defeat to crush him, and for the past six or seven years he'd known little else. With all her soul she prayed that these past six months had given him back faith in himself. Somehow she didn't see how she could return to the homestead—face another winter of misery and loneliness—if Hal's work on the highway hadn't restored his confidence. The thousand dollars he hoped to save didn't actually matter, although the new clothes, the radio and other things would be very niceof course. But it was Hal's outlook that counted most of all, and they must all advance and develop with the country —like the highway.

She raised herself on her elbow to look about at the lovely, tranquil night, and the old pride of country she knew came back stronger than ever. And she wouldn't worry about that opposite hill they had yet to cross for it was like every other obstacle in their lives-not insurmountable.

Fording the river was comparatively easy at this time of year when the water was at its lowest, but the ascent



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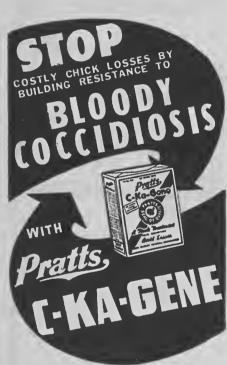
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up the steep bank looked formidable. "If the Websters did it, we can!" Janis told the children and they agreed and started ahead with the cow. All her instincts were to aid them, but she remained with the team and let them cope with the problem in their own way, and after a long, long time she heard their exultant cries that told her they had reached the summit success-

Sweat was glistening on the backs of the team when Janis, with tight lips and straining with them, saw instead of the empty bowl of the sky, tree tops and bush and finally earth as the hill began to flatten out, and heard Don's flattering cheers.

"Hurrah!" Carol cried happily. "The worst of the trip is over! Now we've got nothing to worry about!"

Janis cheered with them. There was no object in confessing to them that because she was penniless she had no idea how they would eat once they reached Kelly's Crossing!

All that day and another night they were on the trail. But now the settlers' cabins were closer together, the land wore a more tended look and the ground was covered with blueberries. When they camped by the side of the dirt road their supper was fresh berries floating in rich milk and home-made bread toasted over a small fire.

"This time tomorrow we'll be in Kelly's Crossing!" Don skewered another slice of bread to a pointed stick. "Gosh!"

But Carol was struck with a dreadful idea and turned to Janis. "Wouldn't it be awful if Dad had started to walk home and we missed him?"

Janis nervously brushed the crumbs from her crumpled skirt and was too alarmed at the prospect to reply. She was counting desperately on meeting Hal at the stampede-not only to relieve their penniless state but to allay her uncertainty of their future.

NEXT morning the road became more and more crowded as both visitors and participants hurried on their way to the stampede. There were Indians on prancing piebald ponies, cowhands in jingling spurs and widebrimmed hats, bearded prospectors and settlers in every sort 'of ramshackle conveyance. They all passed the Lee wagon in spite of the fact that earlier Janis had backed the wagon up to a grassy bank where Katrina was grazing and Don using the end wagon boards as a ramp had led her aboard the wagon. From this vantage point Katrina chewing placidly surveyed all the excited shouting and whooping and uncouth exuberance that frightened the bay team. Still her presence drew all eyes, and Janis keenly aware of her own shabbiness, wished a hundred times to be spared the curious glances.

Kelly's Crossing was like every other frontier town at the peak of its gloryraucous, rowdy and very colorful. Most of the visitors made camp on the outskirts, and Janis seeing a vacant spot near a shady bluff of poplars decided that they would stay here. But the camp was empty of settlers—they had unhitched their wagons and gone directly into town, and when Don had the team tethered to a tree he and Carol urged Janis to hurry.

"Come on, Mother. Don't you hear the band? I can see all the flags waving from here. Hurry!"

Her hands began to tremble. "I-I won't be ready to go into town for a little while. But you run along. I want to move Katrina well into the shade." That sounded better than the truth that she wanted to find a less conspicuous spot for the cow! "You run along and take in the sights!"

They needed no second command and with a lump in her throat Janis watched them running across the grass towards Kelly's Crossing. They were too en-



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thralled with this adventure—too grateful for the opportunity of drinking in all the novelty of crowds and music and laughter to miss the lack of money. But they would return hungry for supper she knew, and what had she to offer them but blueberries and fresh milk again?

Katrina objected to being shoved through a lot of low bushes and out of sight and when Janis walked away leaving her alone she shoved her head forward and began to complain very loudly. Janis winced when she saw the travellers on the road looking curiously in her direction and tried to hide behind the wagon. She was shaking a little when she saw the dilapidated family car loaded to capacity draw up and a short, red-faced man in overalls started across the field towards her.

"You got a milk cow round here, lady?"

"Y-yes."

"How's chances to get a couple of quarts? My kids ain't tasted the stuff for more'n two years."

"Oh, yes. Yes. I have nearly two quarts from this morning's milking." She reached into the wagon and lifted out the tin pail.

The man in overalls waved his arm towards the car shouting, "Come and get it!" Immediately a group of boys and girls bounded joyously towards them.

They drank directly from the pail, pushing and bunting like hungry

"I'll make a bargain with you," the man suggested, reaching for his wallet. "You supply me with two quarts of milk every morning we're here. What say, is it worth a dollar to you?"

"It's too much." Janis protested.

The man thrust the bill into her hand. "It's worth three times that much to the kids and I'd be spending that much or more on soft drinks for

ONG after the vociferous little family had departed she stood staring down at the green bill in her hand. One dollar—a hundred cents—twenty nickels -ten dimes. Her first impulse was to rush into town and purchase something extra special—something neither Carol nor Don could remember eating -a lovely juicy orange, a banana or chocolates-maybe a strip of glossy pink satin ribbon would make Carol's eyes widen with delight, and surely his first pocket-comb would bring a whoop of joy from Don! Overwhelmed with the marvellous potentialities of one dollar Janis could not move but stood alone quietly crying.

Her emotion passed and she knew that the children would need none of these things tonight, filled as they were with the fun of the stampede and all the preparations for tomorrow's official

opening of the new highway. By tomorrow she would have another dollar and perhaps be able to give them a real treat.

When Janis pinned the dollar bill to the inside of her blouse its roughness felt good against her skin and almost at once it began to work like a goodluck charm. One by one the settlers returned to their outfits grumbling about the lack of fresh milk in Kelly's Crossing and praising Janis for her foresightedness in bringing along Katrina.

"Please let me have just enough for my small children and the baby," the women begged.

As quickly as that Janis was in business with every drop of milk Katrina could produce spoken for at prices far above ordinary cost.

She had finished the evening milking and disposed of it all when she began to worry about the children's absence. In a little while it would be dark for already a handful of stars were scattered about the purple sky and in the east the moon was rising.

Then she saw the trio coming through the dusk and her heart began to beat very fast. The children had found Hal!

In the half-light she could not read his expression to find any answer to all her doubts and six months' fear but she noted the proud carriage of his shoulders and the new buoyancy of his step as he came towards her speaking her name. "Janis! Janis, it's been a long time!"

CHE did not answer even when he b touched her but stood within the circle of his arms every nerve alert to his mood. In this moment she must find that faith in their future—that resolution of purpose lacking in Hal for so long. Was it really there in the hunger of his kiss and the strength of his strong arms?

"I couldn't believe it when I saw the youngsters on the street!" He told her happily. "I was hunting for the Websters or any of the settlers from the other side of the river for news of you when suddenly there they were with their noses pressed to a store-window! It still doesn't seem possible that you made that long, hard trip alone!"

Janis met his eyes frankly. "We had to come. Remember when you left us things were a-a little uncertain."

"You'll never know how I dreaded leaving you with the full responsibility of the children and the place!"

She nodded. "But you liked your work? You enjoyed helping to build the highway?"

Hal laughed and all her doubts dissolved. "It was a wonderful experience. Now I feel that we're ready for the North just as the North is ready for us. We can go back and start to

"Oh, Mother!" Don could not remain

in the background any longer. "You should see the swell radio in the store

that Dad is going to buy for us tomorrow!" "And all the beautiful dresses and

shoes!" Carol hugged herself in glee.

"And you should see the people eating ice cream and fresh fruit and all sorts of stuff!"

"She should see!" Hal scoffed goodnaturedly. "We can do better than that! We're on our way to town to do exactly that!"

Taking Hal's arm Janis felt young and light-hearted and utterly indifferent to her shabby clothes as she went with him quickly, after the children, towards the holiday glitter of lights that were not one-hundredth part of a dollar as bright as their future would be, together.







THIS month The Country Guide takes pleasure in presenting a short story, Katrina and the Stampede, by a young Canadian woman, Nan Shipley, of Winnipeg. It is the second story by this author. In August, 1942, we published Insight, an appealing story by Nan Shipley. In accepting the second story we asked the author to tell us something about herself, believing that our readers like to become acquainted with writers who contribute interesting material. She wrote:

"I started to write as a pastime when I was first married and living in a little out-of-the-way railway town. My husband is a railwayman. Then The Country Guide published my first story and that was all I needed. Since then my work has been in Chatelaine, Macleans, Canadians All, the Family Herald and Weekly Star, and Fashion Magazine. I enjoy amateur dramatics, the ballet, Bing Crosby and my 15-year-old daughter. I hope of course some day to write a Canadian novel,

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Mr. Strachey Talks Wheat

The British Minister of Food discusses the Anglo-Canadian agreement before a Winnipeg audience

N Tuesday, February 25, Rt. Hon. John Strachey, minister of food in H. M. Britannic government, spoke to the Winnipeg branch of the Canadian Club on the Anglo-Canadian wheat agreement. It requires a certain amount of daring at any time for a Socialist minister, once debarred from the United States for political radicalism, to face the assembled orthodoxy of Winnipeg. But to make it the occasion for the justification of the wheat agreement, before an audience saturated with representatives of the Winnipeg Grain Exchange, the breeding ground of dissatisfaction with the agreement, requires nothing short of intrepidity. However, Mr. Strachey spoke easily and convincingly, with a charm of manner which must have come as near disarming his opponents as ever they will be.

The speaker told his audience that he had just come from Ottawa where he had had the privilege of listening to the debate in the House on the agreement. It was a matter of some amusement to him to hear the charges of the opposition that it was a grossly onesided pact made in the interests of the British consumer. His government, as was quite right and proper, had been exposed to the excoriation of the opposition at Westminster, who had accused him of signing an agreement unduly weighted in favor of the Canadian producer.

Obviously, said Mr. Strachey, they could not both be right. He hoped that in the fullness of time it would be proved that they were both wrong. He believed that the best results would accrue from a bargain in which the interests of both parties were adequately protected, and such a bargain he thought the wheat agreement would turn out to be.

In this country critics were saying, "Will Britain keep her bargain if prices drop?" And the freely offered commentary of these same critics was that it was too much to expect. It is an apprehension wholly unwarranted, said the minister. He made the most categorical promise that there would be no effort on the part of responsible leaders in Britain to escape the terms written into the agreement. His assurance was given on behalf not alone of his government, but of the opposition as well. There were many of them who disliked the agreement and did what they could to obstruct it, but once the bargain was made, there was no thought in Britain but what it would be honored to the last syllable.

Mr. Strachey looked at an alternative development. It was possible, after all, that wheat prices may not fall. If they rose would there by any attempt on the part of Britain to default in making practical acknowledgment that Canada provided wheat at less than world prices in the years immediately following the war? Here again he read the text of the agreement and said that both Westminster and Ottawa would resist with determination any attempt from any direction to add to or subtract from the precise wording of the agreement as it now stands.

THE minister then dealt with the allegation that the wheat agreement is a bilateral one and contrary to the spirit of the United Nations organization calling for multilateral trade and freer world commerce. He pointed to the last clause of the agreement which provides for amendment to bring it into line with any international wheat trading arrangements.

The Winnipeg speech was made on the eve of an international meet in London which will attempt to integrate world supplies and demand. Mr. Strachey did not know, nor could anyone else say, if the other wheat exporting countries would take the same long-term view that Canada has with regard to assured markets and prices. It may so happen that some other countries will not be interested in future assurances. They may want to charge all the traffic will bear now, and take their chances on the future.

There were experts in the British grain trade who were advising Whitehall to deal on this basis; on no account to negotiate agreements which committed Britain in respect to the future purchases of grain. Some of these men were predicting that in years to come England will be able to buy foreign grain as cheap as foreign sawdust.

If he took a purely realistic view he might be inclined to agree with the narrow trade view of these British grain experts. But a government has to take into account things which are beyond the ken of traders. In the early thirties Britain imported all the grain it required at abnormally low prices. But at the same time she was importing unemployment. Mr. Strachey believes it is possible to buy wheat too cheaply because it would be contributing to the ruin of the man who grew it. Directly or indirectly, he was your customer. At the expense of two million unemployed before the war, England paid more for her cheap wheat than the account

Mr. Strachey declared he was deeply touched by the concern shown everywhere he went in Canada for the present economic troubles in which Britain is involved. To the destruction of the war was added the difficulties of reorganizing trade and industry. He did not wish to minimize the seriousness of their troubles but he assured his audience that things were not as bad as he had gathered from certain newspapers that had come under his notice on this side of the Atlantic. Some of them were writing Britain off as finished. He remembered a memorable day in the early part of the war when they were engaged in the same occupation of writing Britain off. It was not the first, nor would it be the last time that Britain had been written off, but he assured his hearers that they will still be there to be written off in the

Besides her economic troubles there was a rash of political troubles, at home and abroad. Great transformations were not completed without strain and stress. He could not say when the transformations Britain was now undergoing would be completed, but he believed that when the tumult and the shouting was over the world would discover that Britishers were the same kind of people we had known in the past. In that day they would be ready to clasp the hand of Canada in a satisfying and permanent partnership.

The American press is discussing the advisability of building a fence 1,905 miles long, the full length of the Mexican border to facilitate quarantine regulations against foot-and-mouth. The Mexicans imported two herds of zebu cattle in 1945 from an infected area in Brazil. So far the disease has not broken out in the imported cattle but an outbreak has occurred at Vera Cruz, the port of entry, under circumstances which throw suspicion on the zebus. American veterinary inspectors along the Mexican boundary have been ordered to cease inspections, which is another way of closing the border to all movements of cattle.



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AMERICA PLANS HER FARM FUTURE

Continued from page 14

ery. He can't forget what he has learned about better production methods. He can't change by much the size of his farming area. So he will keep on producing-even if the pattern is different.

And that isn't too bad! The people of this country need and want more food than they were buying before the war. They will demand more than before the war as long as they have enough food dollars to back up their demands. Population has increased about eight per cent since prewar days and people are consuming about fifteen per cent more food per capita. This means that the nation's farm plant is producing for a domestic market that is twenty-five per cent larger than before the war.

Right now, we are producing for an abnormal foreign market; we shall no doubt soon come to the end of abnormal foreign demands. But we shall need larger than prewar exports for commodities such as wheat and cotton. As a matter of fact we shall have a chance to make market demands balance with our expanded production capacity only if we have reasonably good foreign outlets, full employment in this country, the kind of balanced farming that will protect our soil resources, and continuing development of new uses for farm products. If agriculture now had to depend upon a domestic and foreign market of prewar size it would face

So we come to this major fact—a fact that we cannot escape—that agriculture by itself cannot assure the opportunity to use the agricultural plant fully and efficiently. Advancement in business and industry must keep pace with the advancement in agriculture. Unless we have the kind of employment and purchasing power needed in the cities farmers can easily produce wasteful surpluses. And that brings up another inescapable factno matter how abundantly farmers produce, we know from past experience that a good diet will not be assured for the people of the cities and towns unless those people have the food dollars they need.

RECENTLY looked at two charts which compared agricultural production and prices with industrial production and prices for the period between the two world wars. Many of you have seen those charts, no doubt, but I recommend that you look at them again. They have something to contribute to our thinking today. Follow the lines of those charts that represent production and you will note that for the years between the wars the production line for agriculture remains quite constant while the production line for industry zigzags up and down all across the charts. When you look at the line that represents prices you get the opposite picture. In this case industry holds the steady course, and the line that represents agricultural prices goes up and

In looking at these charts I can recall vividly what happened during the period of the depression when the industrial production line and the agricultural prices line took a nose dive. The results were written in terms of human misery, hunger in the cities, foreclosed mortgages and surpluses on the farms. The fact that agriculture was producing abundantly meant nothing to the city man who was out of work and had no money to buy food.

I don't have to remind you of the extreme efforts agriculture was forced to take and which the nation as a

whole had to take to restore equality for agriculture.

In those days equality was all that agriculture could hope for even though it was equality in the wizened, driedup economy. Agriculture had to make a long fight for that much. Yet what was needed was equality in a full production economy.

Why do I recall this history?

I do so because the past presents the challenge of the future. The question is whether the rest of our economy will match agriculture in providing abundance. When the price cycle turns downward, will business and industry this time find an answer other than the cutting of production?

If not, there are probably only three alternatives for agriculture.

The first is a repetition of what happened after World War I, a period of inequality in a contracting economy. This alternative would be disastrous for the nation.

The second is an agricultural effort to match the industrial practice of cutting production in order to maintain prices. This alternative is impractical, if not impossible, even in these days of highly organized agriculture. It would call for more highly centralized controls than agriculture has ever contemplated, and neither the methods nor the results would conform with agriculture's accepted standards. But more than that, it doesn't fit the frame of mind of the farmer who likes to provide food and fibre and who, as I have reminded you, just can't throw a switch and stop production of crops already planted in a fertile earth.

The third alternative is a subsidized agriculture, and that isn't what we want, either. Agriculture wants a market-not a hand-out. The farmers want their dollars in the market place-not in a government cheque.

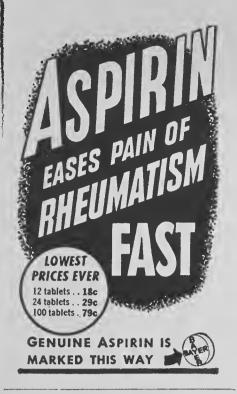
One of the ways to reduce the need for subsidies is to get for the farmer in that market place the full value of his product. And in that effort, cooperatives have a big part. All over the country they have demonstrated the principle of self-help in the farmer's struggle for economic equality. But cooperatives and agriculture generally recognize the farmer's interdependence with industry and labor. To get full value for his product in the market place, the farmer must have a big

Agriculture challenges industry and labor to match production with production, to replace the old economy of scarcity with a new economy of abundance. Agriculture issues the challenge with full assurance that it can live up to its part of the bargain.

AMERICAN agriculture as a whole has the productive capacity to meet the demands of an expanding economy, and it has the desire to use that capacity. Agriculture has an effective program to direct its production into the most needed channels, and the programs to protect individuals against hazards of shortrun fluctuations of price and demand. I think it is no exaggeration to say that if industry were as well prepared as agriculture to produce the amounts and kinds of goods that consumers want, and if industry were as well organized to co-operate in meeting short-term emergencies and longterm national policies, we would be more certain of a long-time future of pros-

And so I repeat: Agriculture has a challenge to throw down to the rest of our economy. Agriculture has the productive capacity to meet the demands of an expanding economy; it has the desire to use that capacity. It can use it fully and efficiently and for the good of all of us if the rest of the economy can match the pace set by agriculture.

Our goal is not a return to prewar



ATTENTION!

This ad is addressed to a man not over age 55 who is concerned about his future security and interested in getting a business of his own. He may be too old for heavy work. Perhaps his income is uncertain or not enough to meet present-day demands. He may be discouraged, but if he has good references and a car, there is a possibility of him qualifying for better than average earnings. He should forward full personal history to the advertiser, Box 187, The Country Guide, Winnipeg.



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Here is a paint with a pigment made of microscopical flakes of pure aluminum—flat, highly polished flakes that overlap each other on the surface, forming a metallic shield that shuts out wear and weather. There's matchless protection in every drop of "Alpaste" Aluminum Paint—economical protection too, because this "liquid metal" paint is longer lasting as well as better looking.

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production—not even to the pattern of prewar agriculture. We seek new standards of nutrition for the people of our nation—new levels of co-operation with those away from our shores who test their concepts of democracy by the performances of our industrial and agricultural plants. The miracles of wartime output must spur us to higher peacetime goals—goals that will use these great plants at full capacity to bring a new richness into the lives of us all. It is to this shining prospect that American agriculture pledges its faith.

—The above article is taken from an address given at Chicago, January 7, 1947, before the National Council of U. S. Farm Co-operatives.

UNDER THE PEACE TOWER

Continued from page 13

C.C.F. votes into seats already C.C.F., and to re-group other sections so that Liberal votes can be dumped into more "likely" territory. A few townships here, a couple of villages there, and you can do wonders, maybe.

In Alberta, this column begs to report that the Liberals and Conservatives are merely displaying academic interest. Neither party has much hope in the foothills province. They figure Solon Low will take it, and they will just try a little salvage. Liberals and Pro Cons will attempt to snatch Edmonton East and Calgary East from the Socreds, and the Liberals may make a try for Medicine Hat. But it sounds like whistling through the graveyard, from here.

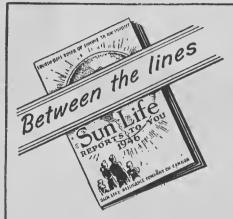
In British Columbia, the hot spot is Vancouver. First of all B.C. gains two seats. Secondly, everybody is trying to steal from everybody. But where the big battle really is to take place will be in and around Vancouver. The Burrard Inlet city and suburbs, according to population figures easily rates two additional M.P.'s But the trick is to decide where to draw the lines. For instance, if you could draw a line in a certain part of East Vancouver, you might easily carve out an additional C.C.F. seat. If you place the new borders elsewhere, you could easily create a Liberal riding in the heart of Vancouver. Run your line over near South Vancouver, and the Progressive Conservatives could carry the day. Not entirely to be overlooked is the possibility that a Labor Progressive candidate could make a showing.

THEY are saying that there will be a new riding on the south side of the Inlet, and another on the north side. Then you hear that Vancouver Island is clamoring for further representation, and that the Victoria-Nanaimo sector could stand another M.P.

In the hinterland, the Conservatives will try to get back Kootenay West, which till 1945 had been Tory for a coon's age. They will also take a stab at Kootenay East, which was Conservative from 1940 to 1945. Up in Cariboo, the Liberals hope to oust the C.C.F., while Davie Fulton, the new Pro Con in Kamloops, is sure of a tussle from the Liberal candidate there, who will try to wrest the riding back to the Liberal side. The Grits also have hopes of restoring Skeena to the ancient faith.

It's a little early yet to see how the boys are making out. Always a business where the right hand never tells the left hand what it is doing, redistribution is old fashioned politics, unabashed and unashamed. Better keep a weather eye skinned on your member, to see what we're trying to do to him here.





AN INSIDE STORY of a LIFE ASSURANCE SERVICE

The Balance Sheet of Canada's largest life assurance company reveals 1946 as one of the most progressive periods since the Sun Life issued its first policy 76 years ago, but figures alone tell little of the human story behind this great co-operative enterprise. For instance, last year over \$100 million was paid out in benefits. What did this mean to the thousands of policyholders and beneficiaries who shared it? Here in brief is some of the story between the lines:



During 1946 over \$31 million was paid in DEATH BENEFITS, providing a continuing income for widows and children and assuring financial security to thousands of homes.



Another \$30 million was paid in ENDOWMENTS, furnishing for many the cash or life income necessary to carry out long cherished plans.



\$14 million was disbursed under ANNUITIES and PENSIONS, bringing independence, security and contentment at a time of life which should be free of all worries and responsibilities.

BENEFITS PAID SINCE ORGANIZATION \$1,919,999,149

NEW ASSURANCES IN 1946 \$348,155,491

ASSURANCES IN FORCE \$3,573,132,753

The savings which Sun Life policyholders send to their Company in the form of premiums to provide protection against the hazards of tomorrow are invested in the nation's industries, in farms, homes and schools, in public utilities and Government Bonds, to be converted into employment and wages, thereby contributing to your economic stability, and that of many thousands of your fellow citizens.

SUN LIFE OF CANADA

A complete copy of the Annual Report for 1946 will be sent to all policyholders, or may be obtained from the Head Office, Montreal

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When baby's tears come from The Agricultural Advisory Committees "Childhood Constipation"



... give gentle Castoria!



"It's the laxative made especially for infants and children."

WHEN the trouble is "Childhood Constipation" . . . when your child's sunny little smile turns into whiny tears - here's the wise thing to do:

Give him Castoria. It's so gentle and safe, yet it works thoroughly and effectively. It won't upset his sensitive digestive system.

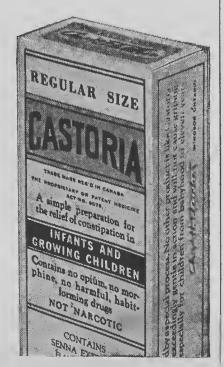
Unlike adult laxatives which may be too harsh -Castoria is specially made for children. It contains no harsh drugs, and will not cause griping or discomfort.

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CASTORIA

The SAFE laxative made especially for children really love it. They take it gladly without forcing.

Get Castoria at your nearest drug or general store today. Be sure to ask for the laxative made especially for children.



Something about National Agricultural Advisory Committees and the National Barley and Flaxseed Committee in particular

HERE is, in this country, a more or less complicated and a more or less integrated system of committees centering on Ottawa, designed to co-ordinate information for the development and benefit of Canadian agriculture. It consists primarily of two groups of committees arising first in the Dominion Department of Agriculture, and second in the National Research Council.

Quite a few years ago there was set up in the Dominion Department of Agriculture a National Committee on Agricultural Services, consisting of the ministers of agriculture for the Dominion and the nine provinces. These are the men of authority through whom all recommendations must pass and from whom all recommendations must receive approval. Supplementing this committee of ministers is a National Advisory Committee on Agricultural Services consisting of the deputy ministers of agriculture, deans of agricultural colleges and others who, by virtue of their positions, are qualified to advise the ministers. These chief advisors, however, are unable alone to give sufficient study to the many different problems involved in the progressive and sound development of Canadian agriculture, and have therefore created a number of other committees and subcommittees, whose function it is to study special aspects of agricultural problems in this country. There is a National Beef Advisory Committee, a National Sheep Committee, with a Sub-Committee on Wool, and there is also a National Barley and Flaxseed Committee, with perhaps others that we do not think of at the moment. These committees and their sub-committees consist of specialists in particular subjects, who meet annually, or as required, to work within the limits of their respective fields and give that closer study which the general advisory committee is unable to provide itself.

Other Committees

The National Research Council, first created by Parliament in 1919, is arranged in divisions, one of which is the Division of Applied Biology, into which fall all research studies based on plant or animal life. It is the policy of the National Research Council to operate, not only through its own laboratories at Ottawa, but in co-operation with the universities throughout Canada, and for the co-ordination of these various activities in respective fields, a number of associate committees on research have been set up. These committees meet at least once each year to exchange information and to assess the value of the work they have done, as well as to suggest, where necessary, new lines of approach or new fields of

Aside from these two major centers of co-ordination, there are two others deserving of mention, since these also involve committees and discussions and projects aimed at a more efficient and profitable agriculture in Canada. The first of these is the Dominion Experimental Farms Service, which is one of four main divisions within the Dominion Department of Agriculture. Since its establishment in 1886, this organization has developed to an amazing size and proportion. As a result of the great variety of work carried on throughout this service in all fields of agricultural production, it has now become necessary for committees to be formed within the service to consider the problems related to such general fields as forage crops, livestock and

Since 1935 when the Prairie Farm Rehabilitation Act was passed, there has also developed in western Canada. especially, a sizable organization the function of which is to carry out the terms of this act. There is, therefore, a P.F.R.A. Advisory Committee in connection with this work, which advises the Minister of Agriculture, under whom the Act is administered. This committee meets annually in February to consider progress and prospects of the three main divisions into which the work of the P.F.R.A. falls, namely, water development, land utilization and cul-

How the Committees Work

From this brief review it will be seen that the western Canadian farmer, in particular, should be well served with advice. Not all of this advice, however, reaches the farmer directly. Much of it requires sifting and sorting, plus a great deal of co-ordination so that it can be fitted into a practical program. It may ultimately reach the farmer in the form of legislation, or departmental policy, or everyday recommendations and information from field offices of the Dominion Department of Agriculture in various provinces, or from the extension services of provincial departments of agriculture. It will also be reflected in the services of provincial universities and in the teaching of students at these institutions.

These committees have evolved different methods of getting their work done. Some are highly trained specialists who work in small groups behind closed doors without fanfare or publicity; and this method is eminently suited to the deliberations of highly trained scientific committees. Others go to the other extreme and hold what amounts to an open convention, with a full program of papers, speeches, resolutions, banquets, and a full complement of lookers on, hangers on, and representatives of industry, to make



[Harold White photo]
At the head table, Fort Garry Hotel, Winnipeg, when the National Barley and Flaxseed Committee were banqueted by The Canadian Paint, Varnish and Lacquer Association. Left to right: Dr. A. C. Dillman, Flax Institute of the United States, Minneapolis; C. C. Pettet, Chairman, Montreal; Prof. J. B. Harrington, University of Saskatchewan, Saskatoon; T. J. Harrison, Winnipeg, Chairman, National Barley and Flaxseed Committee.

sure that the committee recommends nothing that the industry will not like.

Several committees met in Winnipeg in February, of which only one was open to the public. Attendance here was over 80 and the program was jammed with short papers and talks during its two-day session. This was the National Barley and Flaxseed Committee, whose origin dates back to about 1925, and which was reorganized in its present form in 1933. It developed originally out of a need for making the virtues of western grown barley better known to the eastern livestock feeder. In recent years, it has strongly emphasized barley for malting purposes and has repeatedly flailed the wind at successive committee meetings in an endeavor to pursuade western farmers to produce more and more malting barley of better and better malting quality for a premium of five cents per bushel. The chairman of the Committee, T. J. Harrison, Assistant Commissioner for Manitoba, Board of Grain Commissioners for Canada, reported on the accomplishments of the Committee since its beginning, and it made a fairly short story. Undoubtedly the outstanding work associated with the Committee has been the very fine and helpful results secured by Dr. E. W. Crampton, Macdonald College, Quebec, whose work in determining the feeding value of western feed grains has been supported since its inception by the Western Wheat Pools; and the excellent work in barley improvement done in our prairie universities, with financial support received from the United Grain Growers Limited.

The Committee customarily discusses barley on one of its two days of meeting, and flax and flax problems on the second day. All during the war years the supply of vegetable oils has been very short, and never more so than since the war ended. Paint, lacquer and varnish manufacturers have been operating on quota (about 70 per cent of prewar) and have been much interested in increasing flax acreage and flax seed oil supplies. The Canadian Paint, Lacquer and Varnish Association has therefore been given representation on the National Barley and Flaxseed Committee, along with feed manufacturers, the grain trade (both private and co-operative), and agricultural scientists. Now the brewer's big horses have joined the barley parade, and the Dominion Brewers' Association, on the strength of a \$25,000 National Barley Contest conducted last year (to be repeated this year), as well as a projected Barley Improvement Institute, to be located in Winnipeg, has been given representation on the Committee. During the next five years, the Dominion Brewers' Association proposes to spend \$350,000 for barley improvement, especially for malt-

Prices came in for some consideration. A price of \$4.00 per bushel for flax was recommended, and in the case of barley, the sub-committee on marketing and processing, largely dominated by trade representatives, saw fit to recommend against the decision of the Dominion-Provincial Conference in December; and suggested, preferably, an increase in the ceiling price of barley to \$1.00 for feed grades and \$1.20 for the higher grades. The committee also recommended that if Ottawa decided to avoid such a direct increase and to offer a \$5.00 per acre barley payment, this should be supplemented by an increase in the basic barley price on feed barley to 72 cents, with appropriate spreads between higher grades, and a continuation of the five-cent premium on malting barley.

It was understood that the Dominion Government was still considering the question of controls in general, and that no decision on the barley question would be made until after the annual brief of the Canadian Federation of Agriculture, presented to the Cabinet on February 28. The meeting approved the recommendations of the sub-committee, though this seems to have been a mere formality, since it was understood that the recommendations had been forwarded to Ottawa prior to the opening of the National Barley and Flaxseed Committee meeting.

The only other significant resolution coming out of the two-day meeting, was one designed to assure adequate supplies of clean flaxseed by a method of stock piling, at the expense of the Dominion Government.

During the two-day meeting, Dr. J. B. Harrington, Professor of Field Husbandry at the University of Saskatchewan, who originated Royal Flax, now so widely grown in western Canada where rust-resistant varieties are needed, was given a presentation by the Canadian Paint, Lacquer and Varnish Association. On the second day, at a small luncheon, Dr. L. H. Newman, Dominion Cerealist, Ottawa, was also honored for his long years of service in the fields of plant breeding and good seed distribution.

Motor Fuel From Corn Cobs

T is estimated that about 200 million tons of farm wastes are produced each year in the United States. Much of this is plowed back into the soil to maintain fertility and prevent erosion, but work done at the Eastern Regional Research Laboratory indicates that perhaps the market for 100 million tons of this waste might be found in a new process for the production of motor fuels, by the chemical conversion of corn cobs, peanut shells, cottonseed hulls, flax shives and sugar cane bagasse in synthetic liquid fuels. Experimental investigations indicate that from 90 to 95 gallons of liquid motor fuel are obtainable from a ton of corn cobs or cottonseed hulls. Of this amount one-half will be in the form of ethyl alcohol. Corn cobs will be the first of the waste materials to be tried on a large scale in a new, semicommercial plant, with a special staff of 15 scientists.

Nutriculture

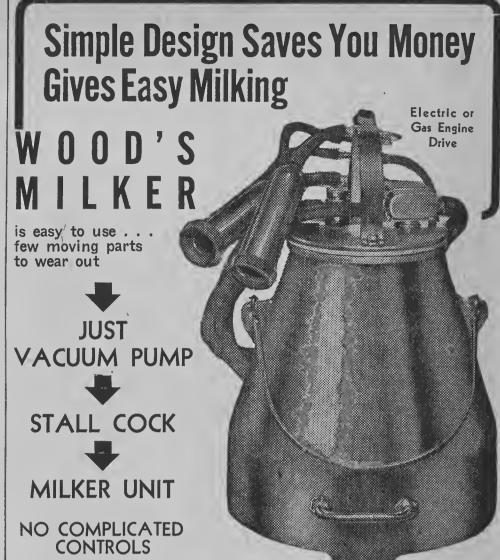
DURING the war period, vegetable supplies for outlying army and air force detachments were sometimes provided by means of "soilless" horticulture, by which is meant the method of growing plants in nutrient solutions rather than in soil. In some cases sand, and in other cases lava cinders were used. The essential elements for plant growth dissolved in distilled sea water were then fed to the plants growing in this barren media. Crops such as tomatoes, lettuce, and other green, fresh vegetables were thus made available for armed forces who would otherwise have been deprived of green fresh food, or could be supplied only at extraordinary costs.

In the United States, especially in Ohio, Indiana, Michigan and some other north-eastern states, there are now numerous small installations operated by civilians, who produce out-of-season green vegetables, such as tomatoes and cucumbers, and flowers such as roses, gardenias, carnations, sweet peas, chry-

santhemums and snapdragons.

The term "hydroponics" is the word customarily used to describe the growing of plants without soil. Like many other supposedly modern practices, it was first tried in Europe more than 100 years ago. It has been taken up actively in North America only during the past 20 years. In 1936, the results of work done over several years at Purdue University were published, and interest was revived. Actually, three methods of soilless culture are involved, the first of which involves the suspension of plants in solutions by means of wire netting; the second, the growing of crops in sand flooded by the nutrient solution as frequently as required, and the solution drained off; the third by sub-irrigation, which is the most expensive system to install.

Soilless culture requires more knowledge of chemistry and plant physiology, as well as greenhouse operating experi-



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Buy a bottle today! Sold on moneyback guarantee by drug and department stores. Or if you prefer, order direct from Mary T. Goldman Co., St. Paul 2, Minnesota. Send \$2.00 (includes tax) for regular size, mailed postpaid in plain wrapper. State color desired: Black, Dark Brown, Medium Brown, Light Brown, Blonde, Auburn.

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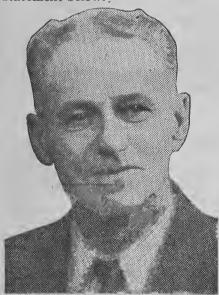
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Monthly Commentary

 This Feature is furnished monthly by United Grain Growers Limited

Drafting a World Wheat Agreement

Can a satisfactory world wheat agreement be made? It will be easier to answer that question after the meeting of the International Wheat Conference which is to open in London, England, on March 18th, the sessions of which will probably continue for one month or more. At that meeting there will be brought to a culmination international discussions which now have continued over many years with the object of producing an agreement satisfactory alike to exporting and importing countries. The London Conference will have before it a draft agreement, the work of a Committee set up some time ago at a meeting in Washington. That draft agreement is as yet in no sense binding on any country, not even upon those countries, including Canada, whose representatives were engaged in working it out. In essence, the draft agreement is a document to be studied and revised, and to be replaced by a new draft agreement to be worked out in London. Then, and not until then, will the agreement be in shape to be presented to the governments of different countries to see whether or not they will affix their signatures.

Price Range of \$1.25 to \$1.55 per Bushel The agreement as presently drafted provides a minimum price of wheat for international trade of \$1.25 per bushel, Canadian funds, basis No. 1 Northern, in store in elevators at lakehead and Pacific Coast terminals, and a maximum price of \$1.55. When the drafting committee incorporated these prices it embodied suggestions made by Canada. In so doing it rejected other suggestions that the minimum price basis might be as low as \$1.00 per bushel and that the maximum price be \$1.80. In putting forward this proposal Canada, in essence, has offered to all countries a similar price basis to that embodied in the British wheat contract. In effect it has said that this country will limit its export wheat price basis to \$1.55 provided it can get assurances that will prevent the basis from falling below \$1.25 per bushel.

The Canadian price, in Canadian funds, is thus made the basis of the agreement. Prices for wheat from Argentina, Australia and the United States would be based on the Canadian price, with differentials worked out to cover different currencies, different grades and different points of delivery. For other wheat exporting nations prices would be determined by the Executive Committee in consultation with the countries concerned.

Export Quotas

Another provision of the draft agreement provides for division by quotas of wheat exports from the major exporting countries. Assuming that these countries combined will find export markets for five hundred million bushels, Canada is alloted forty per cent of the total, or two hundred million bushels, Argentina twenty-five per cent, or one hundred and twenty-five million bushels, Australia nineteen per cent, or ninety-five million bushels. The allotment of the United States would be sixteen per cent or eighty million bushels. So far there does not appear to be an attempt to control the quotas to be exported from other countries.

From the foregoing it is clear that Canada would assume two major obligations under the agreement. The first obligation is to importing countries and is to prevent the export price of wheat from rising above \$1.55 per bushel. The second obligation is to the United States, Australia and Argentina, the other big exporting countries, and would be to restrain its wheat exports from rising above two hundred million bushels annually until those countries had had an opportunity to complete their quotas.

The first concession is an important one, as can be seen from noting the price at which countries other than Great Britain are now importing wheat. The present price level for such wheat is almost \$2.50 per bushel. Quite obviously importing countries should be willing to make some large concessions in return for provisions that might save them approximately \$1.00 per bushel on the wheat they buy. Quite evidently, what it is hoped to get from importing countries is an agreement to take certain quantities annually at a price basis which will not be less than \$1.25 per bushel. The idea embodied in the draft is that if an importing country is to have the benefit of the agreement it must undertake certain definite obligations to exporting countries, and especially to the major exporting countries, Canada, the United States, Australia, and Argentina. If France, for example, wants to import, next year, some thirty million bushels of wheat at a price not greater than \$1.55, then apparently France will be asked to give some guarantees as to what it will do in future years when its need for imports will not be so great. One big question looming up for the London meeting is whether or not such undertakings can be obtained from different importing countries. Presumably the importing country which will not give some undertaking would have to go to the bottom of the list when limited quantities of wheat available for export are being rationed amongst various importers. Presumably, also, it might not be entitled to the benefit of a maximum price clause. Further, any importing country which gets benefits under the agreement ought to be precluded from obtaining its imports from non-signatory countries where perhaps it might be able to buy more cheaply.

What Other Exporters Will Do

For the present no one seems to suppose that Russia can be brought within the terms of an international wheat agreement. Equally no one can guess now whether Russia may have, within the next few years, any surplus wheat available for export.

Similarly it must be supposed that the countries of the Danubian Basin. now largely under Russian influence, will not find it practicable to come within the scope of an agreement. If, as is likely, they remain out, and later find themselves with wheat surpluses for export, what will their position be? Presumably they would find themselves excluded from markets in Britain and the Western countries of continental Europe until those countries had fulfilled their obligations to the exporting countries which are parties to the agreement.

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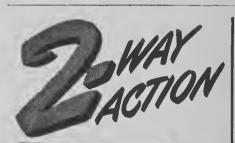
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Up to the present Argentina has shown little enthusiasm for the international agreement. It was Argentina which brought the London wheat agreement to an end in a refusal to be bound by its export limitations. If Argentina remains out, her attitude will not altogether be based on the wheat problem. Argentina has been at odds with other countries, and particularly with the United States, on the question of general political policy. Canadian representatives at the wheat conference will presumably go into the discussions with a single eye to the wheat problem, trying to put international wheat trade on a satisfactory basis.

The United States is taking a leading part in all discussions looking to completion of an international agreement. Nevertheless it remains a question as to whether any particular agreement that may be drafted will be acceptable to that country. Will it, for example, undertake to supply wheat for export at a maximum price level of \$1.55 when that is less than the prevailing price in its own markets and when such an obligation could only be filled by subsidizing exports? The declared policy of the United States is opposed to intergovernmental trading. It is unlikely, therefore, to follow the Canadian example and set up a governmental monopoly that would make it easy to carry out the terms of an international agreement. Its present parity price for wheat is well above \$1.55 per bushel and the United States Congress might view with distaste an agreement which set such a low maximum price in international trade. The United States government, however, makes it an important objective to secure recognition of its claim to a large share of international wheat trade whenever it wants to participate therein, and it may go far in order to obtain recognition to its right to a quota of eighty million bushels annually, even if that can only be maintained at some cost in subsidizing exports.

The Problem of Surplus Stocks

The first draft gives a good deal of attention, without any completely satisfactory solution, to the problem of surplus stocks. After the experience of recent years, which has shown how useful, and indeed, how necessary, it is to carry over surplus stocks from a period of plenty to a period of scarcity, there is evident hesitation about measures which would tend to cut down such stocks. An attempt will be made to have importing countries take on some of the burden of carrying such surplus stocks when they arise. It may, however, be difficult to reach a solution. Such surpluses, when they occur, are most likely to be found in North America, in Canada, and in the United States. Importing countries at present find one of their greatest economic problems in obtaining enough Canadian and American dollars to pay for what they must buy from month to month. They are not likely to undertake any obligations that will require them to find dollars to pay for wheat stocks that might have to be carried for some time either in Canada or in the United States.

The first approaches to an international wheat agreement were made when the world was troubled with surplus stocks and the first attempts at such an agreement were based on the idea of preventing such stocks from unduly depressing prices. Present discussions are going on in an atmosphere of scarcity. Exporting countries remembering the difficulties of past years will be most concerned to prevent a recurrence of such disastrous price declines as have been seen in the past, Importing countries will have a different approach. Their immediate problem is both to get the wheat they urgently

need and to find some means by which it can be paid for.

The coming conference will be watched with the greatest of interest and with the hope that its efforts may be successful. It has a double problem. The first part is to arrive at an agreement, the terms of which will appear to be in the interest of all countries concerned. The second, and perhaps this is the more difficult, will be to provide machinery which would ensure the carrying out of provisions which are agreed upon.

Price Increase in Wheat for Domestic Use

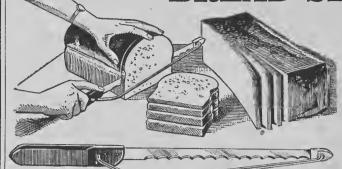
On February 17 the Dominion government announced an increase, from \$1.25 to \$1.55 per bushel, in the basic price for wheat sold in Canada for domestic consumption. The \$1.25 basis had been maintained since September 27, 1943, when open market trading in wheat was suspended and when the government monopoly of wheat trading in Canada was established under the Canadian Wheat Board. From that time on it became necessary for the government to set the price for domestic wheat. As export prices advanced there was a good deal of criticism of the prevailing rate. The claim was repeatedly made on behalf of western farmers that when their product was sold at less than the export price, they were bearing an undue share of the burden of the government's price control policy. That criticism became acute when in August, 1946, the present government wheat price policy was announced under which wheat is currently being sold to Great Britain on the basis of \$1.55 per bushel and to other countries at the prevailing world price as registered in markets outside of Canada. Recently that price to other countries has advanced almost to the level of \$2.50 per

This increase in domestic price will not mean, for the present, any higher returns to western farmers for their wheat. It simply means that more money will go into the hands of the Canadian Wheat Board and to be added to the reserve now being accumulated there. That reserve, or what part of it is left, will be distributed to western farmers on their Participation Certificates some time after July 31, 1950. The first call on the reserve will be to maintain the Wheat Board's initial payment basis of \$1.35 per bushel for the crops of 1947, 1948 and 1949. If prices during those years should fall, the reserve will be drawn upon to protect the government against any loss on account of its guarantee of a basic and minimum price. If a very great fall in prices should occur it would use up all the reserve, including the additional returns now to be obtained from wheat sold to domestic consumption. If there is no decline great enough to encroach upon the reserve, the increase in the price for domestic wheat may add from 3½c to 5c per bushel to the amount which ultimately will be distributed on participation certificates. The increase in price means an immediate cost to the Dominion treasury of the subsidy now paid to millers in order to keep down the cost of flour and mill feeds sold in

Prices for milling products are governed by a ceiling based on wheat at 77%c per bushel. The government has been paying the mills the difference between that level and \$1.25. Thus every bushel of wheat milled for use in Canada has meant a payment by the Dominion Government of 47%c per bushel. With the increase now announced, the subsidy to millers will be increased to 77%c per bushel. Thus, so

Turn to page 63

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Well-known Pioneer Passes

The passing of William Reinsch, a

well-known pioneer, is deeply regretted

by the people of this community. Mr.

Reinsch came from Russia in 1902, first

settling at Jensen, Saskatchewan. He

later moved to Brunkild in 1919 where

he farmed up until recent years. Three

sons, August, Henry and Robert are all

well-known in Brunkild. - Brunkild,

A Fine Hockey Record

made quite a record for itself this year,

having played a total of 12 league games

and four exhibition games without a

loss. Niverville and St. Pierre finished

second and fourth, respectively, in the

Carillon League and will play off to see

which team meets Otterburne in the

finals for the Prefontaine Cup.-Otter-

Passing of a Pioneer Resident

Gaboury is deeply deplored by a wide

circle of friends and neighbors. Mr.

Gaboury was born and raised in this

Former U.G.G. Paymaster J. E. Storey recently retired from the

office of Secretary-Treasurer of the

R.M. of Arborfield after serving in that

capacity for 32 years. Mr. Storey has

for the past 12 years also acted as pay-

master for United Grain Growers

Limited until the recent starting of a

daily banking service, the Bank of

Montreal having opened a branch.

Previous to this the nearest bank was

The A.C.T. Amateur program held

in the Arborfield Curling Rink recently

and broadcast through CKBI, Prince

Albert, in aid of the Tuberculosis Fund,

netted \$1,695, a very creditable showing.

The fire which destroyed the sixroomed village school at Arborfield

caused a total loss, including the build-

ing and all the contents. - Arborfield,

Appointed Assistant Professor

pointed assistant professor in Plant

Science at the University of Manitoba,

spent several years at Morden Experimental Station where he did very valu-

Sig. Helgason, who was recently ap-

district .- Swan Lake, Man.

in Tisdale, 34 miles away.

Saskatchewan.

The untimely death of Mr. Napoleon

The Otterburne hockey team has



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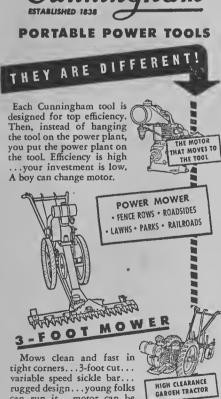


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able work in breeding and advancing the standards of corn, sunflowers and forage crops for the West. Mrs. Helgason is the daughter of Dr. and Mrs. Rollins of Wadena.—Bankend, Sask.

Win British Consols Curling Trophy



The winners of the British Consols Trophy in the 1947 Winnipeg Bonspiel were James Welsh and his Deer Lodge Rink consisting of his brother, Alex., playing Third, and Jock Reid and Harry Monk, Second and Lead, re-

spectively. The win was a very popular one but particularly so in the Winnipeg office of United Grain Growers Limited where Jimmy has been employed for about twenty years.

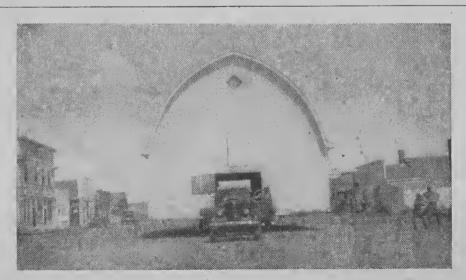
The winning of this Trophy gives Jimmy and his rink the opportunity of travelling to St. John, New Brunswick, to play in the Dominion Finals, and his many friends will be pulling hard for him to bring home the Dominion Championship. This is not the first time he has competed in the Dominion Event as he travelled to Toronto in 1933 with a Deer Lodge rink skipped by the late Johnnie Douglas, and took his own rink down in 1937. — Winnipeg, Manitoba.

Bonspiel News

The Bredenbury Curling Bonspiel had a representation of 25 rinks. The grand game provided some keen rivalry among the players and the skips whose names follow: S. Goptson, F. Trembley, A. Wilson, E. Thompson, H. Miller, G. Tunmore, R. Vickers, V. Hughes, T. A. Porter, G. Churchill, P. Wilson, M. Wilson, A. Vickers, J. Bridgewater, H. Bridgewater, R. Bridgewater, L. Hosiver, Lew. Leppington, H. Vickers, G. Shearer, L. McLean, J. Rudy, W. Thorsness, K. Hoath, D. Bennett.-Bredenbury, Sask.

"Blizzard Week"

Old Man Blizzard appeared in full dress during "blizzard week" recently. With the continued fall of snow and high winds, snow piled up into drifts from 10 to 18 feet in height. It is considered the worst storm for 25 years. Roads were impassable even for horsedrawn sleighs. Farmers had a hard job to draw feed from the stacks to their stock, and most people did not venture outside at all. Feed, fuel and other necessities were in serious short supply due to the storm.-Foxwarren, Man.



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Four Bushels to \$45,000

Richard Platte, well-known farmer in the Nipawin district of Saskatchewan, and a prominent figure in the Canadian Seed Growers' association, early in 1945 acquired four bushels of a precious new variety of barley called Montcalm. The variety originated at Macdonald college, Ste. Anne de Bellevue in Quebec, and was endorsed by the Manitoba agronomists at their December conference as the leading malting barley for this province.

According to information received by the National Barley and Linseed Flax committee, Mr. Platte seeded the four bushels on 11 acres in double rows 44 inches apart. He harvested a crop of 450 bushels, and is reported to have made something over \$45,000 as the result of his original investment and hard work—a worth while result.—Wadena, Sask.

Millet Dairyman Awarded Cup

Martin Nelson, Millet, has been awarded the challenge trophy offered annually for the better milk competition, open only to quota shippers.

Mr. Nelson has been a quota shipper only for a short time having previously shipped inspected milk to Edmonton.

Mr. and Mrs. Nelson and sons have built up a fine herd of registered Jersey cattle.—*Millet*, *Alta*.

Back at Chinese Mission

Dr. Isabelle McTavish recently arrived at Changte, North Honan Province, China, to resume her work as a United church missionary in that country, according to a letter received from her by her brother, John F. McTavish, of Strathclair.

Dr. McTavish left her home at Strathclair September 4, 1946, and sailed several weeks later from San Francisco after having been held up there for three weeks by the strike of marine workers.

She arrived in Shanghai October 15. Part of the journey to Honan was made on an open flat car, the passengers seated upon their baggage and sheltered from the wind by more belongings. Dr. McTavish finally arrived at Changte several days later.

Writing November 1, she said that she was sitting in the room in which she slept 31 years ago. The day, she says, was the anniversary of her mother's birthday.—Newdale, Man.

Large Graduating Classes Reported

The large numbers in this year's graduating classes at the two Provincial Schools of Agriculture at Olds and Vermilion constitute a record for these schools. S. H. Gandier, Superintendent of Schools, reports that during the first week of April 246 senior students will write the final examinations. Of this number 168 are students in Agriculture and the remaining 78 are girls in the Home Economics courses. Number of graduates from each school will be almost equal, the senior classes at Olds totalling 126 and at Vermilion 120. Diplomas will be presented at the closing exercises to be held on April 9.

The dormitories at both Olds and Vermilion are filled to their full capacity this winter with approximately 200 students in residence at each school. Included in this term's student body are about 60 ex-service men, the majority of whom intend to engage in farming on their own places.—Edmonton, Alberta.

Heads Canadian Legion

Tom Armstrong, a veteran of the 1939-45 war, was elected president of the local branch of the Canadian Legion. His executive are all "young" veterans and include Roy Wilson, vice-president; Gordon Pearn, treasurer, and Rod Drever, secretary.—Stettler, Alta.

Old Man Winter Again!

Old man winter set new records in this district. Doubters are asked to check with the men that operate the snow plows on the highway.

The Junior Seed Growers recently sponsored a most successful gala night in the Community Hall.—Vista, Man.

Snowmobile Popular

Alex Cleland having purchased a snowmobile was kept a very busy man during the period that the roads were impossible to travel on other than by team or snowmobile. Mr. Cleland as-

sured the residents here and also the farmers, safe and speedy transportation to Rossburn or to wherever they desired to go.—Birdtail, Man.

Box Social Is Enjoyed

The school children and Miss Margaret Gillies, the teacher, who recently put on a Box Social in Cracknell School, were well repaid for their efforts. Despite the cold weather, a good crowd turned out and \$25 profit was made for the Junior Red Cross. Lloyd Hackman, Ed. Klimack and Orville Davidson supplied the music for the dance.—Cracknell, Saskatchewan.



J. C. Neufeld and friends from Waldheim, Sask., with a morning's catch at Shell Lake.

Canadian Farm Income Estimates

Half of Canada's farm income comes from livestock

THE official Dominion Bureau of Statistics estimate of farm cash income covering the year 1946 was announced in February. The figure, \$1,742,300,000, was the second highest in the history of Canadian agriculture. It was exceeded only by the year 1944, when farm cash income reached a peak of \$1,828,500,000.

In 1944, Saskatchewan led all provinces with the remarkable total of \$543.7 million, primarily due to wheat sales \$100 million greater than in either 1945 or 1946. In 1944, also, Ontario, was suffering from a series of unsatisfactory crops during the war years. Ontario farm cash income in 1946 was \$469.3 million; Alberta farmers had a cash income of \$289 million last year; Manitoba \$171.5 million; and British Columbia \$86.1 million.

Total cash income from livestock in 1946 exceeded that from all grain crops, seeds and hay, amounting to \$574.1 million as compared with \$524.8 million. Dairy products came next with a farm cash value of \$285.6 million, followed by eggs to the value of \$85.9 million. This farm cash income figure for eggs is notable when regarded in the light of income from other farm products. It is about six times the amount received from the sales of sheep and lambs, nearly 12 times the value of Canada's sugar beet crop, more than twice the value of the potato crop, nearly twice the amount received for barley sold from the farm, 81% times the amount received from fur farming, and over 51/2 times the cash value of the

More than 50 per cent of Canadian farm cash income last year was from livestock, the figures being \$959.1 million, out of a total of \$1,742.3 million. In the four western provinces, total farm cash income was more than 50 per cent of that received by all Canadian farmers, the figure for the west being \$941.1 million. Here, however, the amount received from the sale of livestock and livestock products was less than half the total, being \$370.6 million.

come are based on reports of marketings and prices received by farmers for principal farm products. Income figures other than cash income are not shown in the recent statement, but they are calculated annually as cash income, gross income and net income. Gross income is calculated by adding to cash income the value of all produce grown and consumed on the farm, together with a value for house rent. To this total is adjusted a figure for changes in inventory, in order to secure the gross income figure. (In 1942, for example, farm inventory was calculated to have increased by \$368.2 million, while in 1945, it decreased by \$233.6 million. From the gross income figure so arrived at, operating expenses and depreciation charges are deducted to secure a figure for net income. Farm operating expenses increased materially between 1939 and 1945, but they did not increase nearly as rapidly as cash farm income or gross income, or even net income. Operating expenses in 1939 were estimated at \$487.6 million, and net income for the same year was calculated at \$474.2 million. By 1945, operating expenses and depreciation had increased to \$750.5 million, but net income had gone up to \$987.5 million.

Government estimates of farm in-

It may interest readers to know that the Canada farmer's bill for operating expenses in 1945 (the last year for which these figures are available), ran this way: Purchases of feed and seed through market channels, \$173.4 million; wages to paid labor, \$122.8 million; depreciation of buildings and machinery, \$97.8 million: taxes on farm land, \$68.2 million; tractor fuel, oil and grease, \$42.8 million; net farm rent, \$35.7 million; interest, \$29.7 million; building repairs, \$24.7 million; machinery repair parts, \$24.5 million; automobile expense, \$24.4 million; fertilizers, \$21.6 million; miscellaneous expense including binder twine, fencing, nursery stock, blacksmith and machine shop charges, truck and other expense, about \$85 million.

PRICE INCREASE IN WHEAT FOR DOMESTIC USE

Continued from page 61

long as the price ceiling remains on mill products, consumers will be getting them at almost exactly one-half the price basis which would apply if there were no ceiling price. For the present, however, the price ceiling on mill products is to remain for the benefit of consumers. As the Hon. Mr. MacKinnon put it, in making his announcement, "The government regards the continuation of price ceilings on flour, bread, and other wheat products, as a necessary part of its program of orderly decontrol."

The flour subsidy is occasionally referred to as a subsidy to the mills, and it is quite true that in the first instance it is paid to the mills. However, it is actually a subsidy to consumers, to whom it is passed on by the mills in low prices charged for mill products.

Cost of Feed Wheat Increased

The price advance applies not only to wheat milled for domestic consumption but also to wheat sold for feed in Canada. The government has been subsidizing the producer of feed wheat (which includes wheat graded lower than Four Northern) to the extent of twenty-five cents per bushel. That subsidy will be continued but will not be increased. Feed wheat will accordingly cost the buyers more. The actual increase is 33½c per bushel because in addition to the price advance purchasers are now required to pay 31/2c per bushel more to cover carrying costs. This increase caused an immediate outcry from purchasers of feed wheat, and especially from poultry feeders. Such protests were made public through the office of the Canadian Federation of Agriculture at Ottawa. The situation throws light upon a divergence of interest betweeen farmers in Western Canada, who produce grain, and those in the East who buy grain for feed. The former want to get the full value of their products; the latter want to buy feed grains as cheaply as possible.

Some of the eastern critics blamed the government for maintaining the ceiling price of flour, and increasing its subsidy for the benefit of flour consumers, while the farmer buying wheat had to stand the increase in price. Such criticism overlooked one important fact. That is that not only had the price ceiling and the subsidy applied to the benefit of flour consumers; they also applied to the benefit of the farmer who buys bran, shorts and other milling by-products for feed, as these, too, are still furnished on the basis of wheat at 77%c per bushel. If and when the subsidy and the price ceilings disappear there will inevitably be not only a sharp advance in the price of flour but also a corresponding advance in the price of milling by-products.

The price differentials for lower grades of wheat have been, for No. 4 Northern—10c under No. 1 Northern; for No. 5—13c under; for No. 6—17c under, and for Feed Wheat—19c under. These have been maintained in the domestic market with an additional allowance of 25c per bushel on grades lower than No. 4 Northern.

Under present scarcity conditions almost any grade of wheat will be gladly bought by countries overseas. Undoubtedly the advance which has now occurred in the price of feed wheat in Canada will tend to shift demand for feeding from wheat to other grains. The government says that for the present it considers that desirable, and that, in view of the continued overseas demand for wheat for human food, so far as possible grains other than wheat should be used for feed purposes in Canada.



In pioneer times there was no overgrazing and weeds did not invade native pastures.

The Old-Timers and the Weeds

Had the early settlers known more about certain weeds when they were first introduced, much grief would have been saved

By ARCHIBALD C. BUDD
Who writes about the Swift Current district.

OOKING back over the past 36 years one of the greatest changes that shows itself is the change in our country's floral makeup. Before the homesteaders came in the plains were the home of the huge buffalo herds, together with antelope, deer, elk, moose and predators such as wolves, bear and fox. At times the prairie was heavily overgrazed, but only for one season at a time. The buffalo roamed over vast areas and did not return until the grass was regrown, therefore there was not sufficient overgrazing to weaken the stand of better feed and allow weedy species to become dominant.

Unvegetated land was rare and the native grass cover was undisturbed except by badger, gopher, fox holes and mounds. On these would be growing a few weedy plants such as tumble weed and wild tomato. With these few exceptions, the land was practically in its virgin condition and the great changes in the flora have been due to the entry of the homesteader.

Fires, some started by Indians and some by natural causes, ran across the country, and these, together with the browsing deer and antelope, kept down the growth of trees and shrubs to a very great extent. Thus, the early homesteader found the plains almost entirely treeless with a good growth of speargrasses, wheatgrasses and a fair amount of blue grama grass and thread-leaved sedge. In more favored locations were clumps of wild rose, wild licorice, prairie pea, milk vetches and wild bergamot.

The small amounts of land under cultivation were, in general, clean and the few weeds that were in evidence were mainly native species such as lamb's quarter, spear-leaf goosefoot and western couch grass. An old government fireguard, which ran across our district from north to south, was covered with a growth of tumble weed and some tumbling mustard. This fireguard was a strip of plowing about 20 feet wide meandering through Range 11 from the Saskatchewan River to the Frenchman ·River, supposed to check prairie fires but too weedy then to be very effective. The few weeds in cropped land could easily be pulled by hand, and this was a very frequent Sunday occupation.

IN 1911, a few tumbling weeds were making their appearance and the main crop weeds were wormseed mustard, a native weed still persisting, and a few weeds brought in by seed grain from Manitoba, such as cockles, false flax,

ball mustard, wild mustard and wild buckwheat. Of these, wild buckwheat was the only one to persist to any extent, perhaps because it was better suited to our climatic conditions, but more probably, I think, on account of the difficulty experienced in removing its seed from seed grain. The triangular-holed buckwheat screen was not used in fanning mills then.

In 1912, a considerable amount of stinkweed was seen on many farms, especially on the level plains just east of Swift Current but very little on the newer lands about 20 miles east. Late plowed fallows were starting to grow quantities of tumbling mustard and the large acreages of flax which were being seeded brought in a generous supply of weed seeds of various species, mostly of the mustard family, but also bluebur and other weeds.

In. 1913 there were many tumbling weeds, but a favorable season masked their effect to a great extent. On land left for summerfallow, tumbling mustard and wild buckwheat were very bad and there was a generous sprinkling of other weeds, their identity generally unknown to the farmer. Redroot pigweed and lamb's quarter were plentiful in crops, the season appearing very favorable for them.

Then came 1914, a very dry year, drier even than 1910, and in consequence the thin crops were polluted with a heavy growth of tumbling mustard. In the fall of that year, there was considerable roadwork done by the government as a relief measure and feed oats were shipped in from Manitoba and eastern Saskatchewan. These feeds oats were abominably dirty and were mainly responsible for the great infestation of stinkweed and wild oats in subsequent years. Seed grain was also shipped in the following spring and was another prolific source of weed

THE first year that Russian thistle was noticed in the district to any extent was 1914. It had probably been there for some time, unnoticed, but in the fall of 1914 this peculiar reddish, spiny plant was along roadsides everywhere, its identity unknown to most farmers, although there was an excellent picture of it in Farm Weeds. In those days what little weed publicity there had been was mainly directed against sow thistle, which in these drier areas was no menace, and education along the lines of weed eradication was sadly neglected. Unfortunately, the potentialities of Russian thistle as a weed were not realized or steps might

have been taken then to eradicate it. The year of 1915 was one of those that farmers dream about but only see once or twice in a lifetime, when grain grew just as well where the drill ran out on the headland as it did in the field, and vields everywhere were running 30 to 40 bushels per acre of No. 1 wheat. It was a cool summer with plenty of steady drizzling rains and little wind except in the early spring. Weeds were there of course, due to the imported feed and seed, but the heavy crop quite covered any competitive effect from that source. Nevertheless, stinkweed developed well and shed copious quantities of ripe seed. Russian thistle and red-root pigweed lay low and waited their time but grew well in the fall

Good crop prospects had encouraged the municipalities to do considerable road grading in addition to that done as a relief measure the previous fall and these new grades made an ideal place for many roadside weeds. Consequently, the spider flower, the white and yellow evening primroses, false mallow, gumweed and golden rods were noticed in fair abundance.

when the farmers were too busy har-

vesting the bumper crop and paying

their debts to bother about weeds.

The following year, 1916, was characterized by three torrential downpours, almost cloudbursts, and plenty of heavy rains, so crops and weeds grew splendidly. Lamb's quarter was everywhere, but the grain grew just as fast and rank as it did. There was a dense stratum of stinkweed at the base of the grain crop from seed produced so abundantly in 1915, and Canada thistle was getting to be quite prominent along the edges of fields. Wild oats was fairly plentiful also, but never seemed to get really bad as in moister districts further east.

In that year one quarter which had been abandoned was covered with a dense growth of blue-bur, stinking to high heaven with the characteristic odor of blue-bur, like a mouse infested granary. In a year like that when one could almost hear the crops growing, trifles like weeds were considered of very little moment as there was moisture enough for both wheat and weeds and the lessons of the 1914 drought were all but forgotten. Rust, however, hit the district and the promised 40-bushel crop threshed out five or six bushels of very low grade grain.

Then came the gloomy years of drought, drifting soil and weeds, 1917, 1918, and 1919, which put half the farmers out of the country and polluted the farms with Russian thistle. During these three years the thistle rapidly increased and took full advantage of the scanty crops to fill up all vacant spots. As most farmers had started following the recommendations of the government and farm periodicals and were seeding lightly, there were

many gaps and misses in the fields for the weeds to occupy. The exodus of so many farmers to other parts meant a large acreage of unoccupied and abandoned farms which rapidly grew into jungles of Russian thistle, tumbling mustard and other weeds that blew all over the country in the high winds which accompanied the drought of those years. Many farmers, having but a limited feed supply, decreased their acreages and allowed parts of their farms to go back to weeds.

Since those years, Russian thistle has been the dominating weed of the district and most other species are either crowded out or are able to become dominant only in very favorable seasons. However, there have been other weeds coming in during the past three decades and many are getting their feet in, so to speak, ready to take their place in the weed flora as soon as biotic and climatic conditions permit.

THE shipping in of nursery stock with soil on the roots has meant the infestation of many gardens by purslane, an iniquitous annual, very difficult to eradicate. These nursery importations have brought in some of the most obnoxious perennials also, including field bindweed, Russian knapweed, hoary cress, etc. A trend to growing alfalfa, sweet clover, millet, etc., on some farms has brought in seeds of hoary cresses, leafy spurge and several lesser known species.

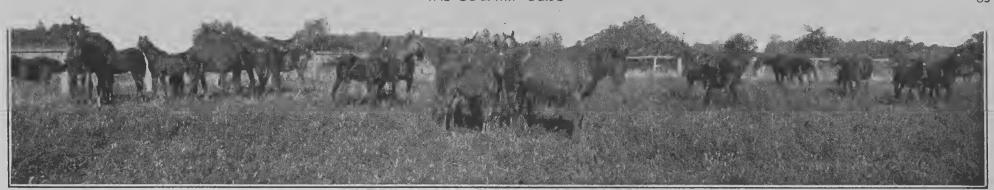
Garden escapes have also added to the weed flora some very aggressive and persistent plants. The Kochia or summer cypress is spreading out from gardens, especially in towns, as also is the garden atriplex but to a lesser extent. Since 1928, the conspicuous yellow goat's beard has become a familiar sight along roadsides and shelter belts. This was originally a garden plant in Colorado.

Some native plants have taken advantage of changing conditions and are giving much cause for worry. An example is the false ragweed, a major cause of hay fever, which overruns town lots and is rapidly spreading to more rural areas. There is also the native wild morning glory, a persistent native perennial of the lower lands which has, in several places, entirely dominated the cultivated land and which can smother any crop, even Russian thistle.

During the last decade much has been learned of the value of crested wheat grass as a feed crop and as a smother crop for weeds. It has been shown to be perfectly hardy and adapted to western conditions. It is easy to sow and quick to germinate, the seed is cheap and easy to obtain. Full use should be made of it and it has great promise as a partial solution of the weed problem.



Years of overgrazing necessitate reclamation measures. This picture shows a Sasketchewan pasture in which re-seeded grass is beginning to regain control.



The Thoroughbred holds its own in England and Ireland.

Britain's Agricultural Bill

The Government proposes sweeping measures to secure stability and efficiency and provide guaranteed prices and markets

RITISH farmers have watched with keen interest the development of postwar Government policy in the United Kingdom, and have evidenced considerable anxiety as to the effect of such policy on agriculture itself. Of a total of 60 million acres in the United Kingdom, about 48 million are devoted to agricultural use. The industry employs approximately 11/4 million people and before the war had a total production value of approximately 290 million pounds annually. During the war the value of agricultural production rose to about 580 million pounds, which meant an appreciable proportion of the total national income.

The National Farmers' Union of England and Wales has been very active, especially since the close of the war, in pressing on the Government and the British people the importance of the agricultural industry and the necessity of preserving it against unduly low prices and depressed living conditions resulting therefrom. It has been vigorously argued that a substantial increase in British agricultural production would be of considerable help to the national economy since such increase would eliminate the necessity for some portion of Britain's heavy food importations and thus ease the problem of developing a sound balance in international trade. The N.F.U. has accepted the principle that British farmers must be prepared to supply high quality produce "at an economic price to the consumer, consistent with a fair return to those persons necessarily engaged in production and distribution." British agriculture, the Union believes, "is passing through a critical period in its history. Perhaps a more critical one than it has ever experienced."

The Agricultural Bill

On November 15, 1945, the British Government announced through the Minister of Agriculture, that it would give effect to an agricultural policy, later to be enacted into legislation. In December, 1946, the Minister, Tom Williams, introduced into the House of Commons the Government's new Agriculture Bill, which, in addition to its five parts and 111 paragraphs, was supplemented by a White Paper of explanation. The policy of the Government is to promote a stable and efficient agricultural industry; and the legislation is intended to provide the foundation on which the future structure and organization of the industry will rest.

The five parts of the bill deal first with guaranteed prices and assured markets; second with problems of sound husbandry; third, with the general relationship between landlord and tenant in agriculture; fourth, with policy in respect to small holdings, and fifth, with administrative machinery.

The provision for guaranteed prices and assured markets applies to the whole of the United Kingdom, and to such products as are listed in a schedule attached to the Act. They do not, however, include horticultural crops. The Minister is to continue the practice of holding annual reviews of farm prices and agricultural economic conditions, and it is stated that such reviews must be conducted in consultation with producer representatives. Prices may be uaranteed fixed prices, deficiency payments, acreage payments, subsidies, or prices calculated on the base of a formula (such as the hog-barley ratio with which we are familiar in this country). It has also provided that production controls may be applied, provided such imposition is made at the time that price determination and other factors are considered.

Part two of the Act lays down rules for good soil husbandry, and good estate management. Control measures are provided to take care of those individuals who fail to manage in accordance with set rules. These rules are laid down in general terms, but they provide for reasonable efficiency and the care of fixed equipment such as buildings, drainage ditches and hedges. The land itself must be maintained in such a state of fertility and physical condition that it will not deteriorate in the future as the result of current practices.

Will Demand Efficiency
The Minister may supervise the operations of any owner or occupier who does not comply with these requirements, and any individual under such supervision may receive directions from the Minister as to how he should carry out his responsibility for good management. Should these directions not be complied with, the Government may see that the work is properly done and recover any reasonable cost from the

Government farm, or rent it to a satisfactory tenant.

The third part of the Act, dealing with landlord-tenant relationships, is intended to retain all of the best features of Britain's long experience in farm land tenancy. Both the landlords and tenants are protected with respect to their several shares in short, medium and long-term improvements made during tenancy. At present, conditions respecting tenancy and tenant rights are described as chaotic and unsatisfactory, so that some changes have been introduced into the Act by which it is hoped that, gradually, a substantial measure of uniformity will be secured. The Act also provides that where a tenant farmer is reasonably efficient, he need not accept a notice to guit and may object to the notice, which may not take effect until the landlord has obtained the Minister's consent. This consent will be based on the probability of increased efficiency in the use of the land for agricultural purposes if a change of occupancy is granted. Landlords, dissatisfied with the farming efficiency of a tenant, may obtain a certificate of bad husbandry from the Government, and thereafter serve notice to quit, unless the Minister decides to place such a tenant under supervision during a trial period. The Minister may also vary certain terms of a ten-



War time plowing orders cut down the area available for sheep.

individual in return. There are no appeals from such orders. Where an order is made, requiring the addition of fixed equipment, however, the owner or occupier may appeal to the Agricultural Land Tribunal. The owner or occupier may be dispossessed by the Minister if he fails after 12 months of supervision to show satisfactory improvement in his farming methods. If a tenant, his tenancy will be terminated, and if an owner, he will be required to let his land to an approved tenant. Such individuals, however, may make representation to the Minister, and also an appeal to the Agricultural Land Tribunal. In the last resort, the Minister may possess the land and farm it as a

ancy in the interests of efficient husbandry.

Uniform Pattern for Small Acreages

Part four of the Bill is based primarily on the desire of the Government that provision of smallholdings should be based on agricultural rather than social considerations, as in the past. Of 28,700 smallholdings held by county and county borough councils, the average size is 17 acres. Many of these are unequipped and unable to provide fulltime occupation for the occupier. Several considerations have governed settlement on smallholdings during the past 50 years, none of which are now considered valid by the Government.

The Bill aims to encourage persons with agricultural experience, so that they may eventually become farmers on their own account. Persons without agricultural experience will be required to take positions as agricultural laborers and gain experience in this way. In future, also, smallholdings must be located upon good land; and local authorities desiring to acquire land for this purpose must obtain consent of the Minister, who will also consider the equipment, size and layout of the smallholding. He may also make loans to smallholders for working capital, up to 75 per cent of the amount required.

Machinery of the Act

The fifth part of the Bill deals with the administrative organization necessary to carry out a general agricultural policy. An Agricultural Land Commission will be created to manage the land vested in the Government, and to act in an advisory capacity on questions of management. County Agricultural Executive Committees may be set up, to consist of 12 members, of whom five will be direct Government appointees, the remainder being three farmers, two workers and two land owners. These committees will replace the former agricultural committees of county councils. Further agricultural statistics will also be required of British farmers, and provision is made for a large number of administrative services, ranging from the acquisition and management of land, the control of pests and weeds, to the continuation of drainage, water supply and lime grants. The Minister may also control the splitting up of farm units for the sale of parcels of land; and where such sales are made without his consent, he may compulsorily buy the several parts and put them together again in order to avoid the division of farms into small uneconomic units.

In times of emergency such as the present, the Minister may also serve directions on all farmers to produce commodities needed for the national food supply.

Blessing the Plow

A^N interesting service, one of the many similar ceremonies held in English country churches, was broadcast by the BBC recently from Nocton Parish Church, Lincolnshire.

To the ringing of the church bells in the background, a description was given of the service. Representatives from various farming organizations, the National Farmers' Union, the Young Farmers' Club, the Agricultural Workers' Union and the Women's Land Army, all took part in the ceremony and the lessons were read by local farmers. A plow was towed up the church during the service and the Blessing of the Plow was given: "God speed the plow, the plow and the plowman, the farm and the farmer; God speed the plow, in fair weather and foul, in rain and shine."

In pre-Reformation days, English plowmen used to keep lights burning before church shrines to obtain a blessing on their work. "Plow Monday" processions, when a gaily decorated plow was drawn through the village by plowmen, helped to pay for those plowlights.





Quick-Rising Dry Yeast at Your Grocer's



A Century of Limericks

Wherever English is spoken readers remember the little book by Edward Lear which started it all

OWARDS the end of 1946 British and American publications called to mind with gratitude the appearance of a little volume, "The Book of Nonsense," by Edward Lear, which has become legendary. For Lear started the vogue of the Limerick, a form of nonsense verse which has engaged the fancy of some of our most gifted authors as well as countless amateurs. Afterward Lear wrote nonsense verse in which he departed from the Limerick form. Some of these, like "The Owl and the Pussy Cat," became classics.

Lear was not primarily an author, but a topographical artist who made field sketches at home and abroad, as far afield as India. He was a bit of a naturalist too, and his first book, one with a forbidding title, dealt with the parrot family.

Nobody seems to know for certain who invented the Limerick form of verse. Every attempt to associate it with the Irish county of that name has failed. But it was Lear who popularized it. Lear's own rhymes were nursery clean. In fact they earned him such a reputation for propriety that he was appointed drawing master to the young Queen Victoria. Yet by the irony of fate, the metrical form he promoted has become the chosen vehicle of rhymsters whose efforts are too highly spiced for polite company. The New York Times has made a collection of some Lear and post-Lear Limericks, illustrated, from which we have borrowed the following.

It is fitting to begin such a collection with one of Lear's early Limericks. This one illustrates his style and subject matter, for as a nature lover many of his verses deal with animals.

There was an old man with a beard, Who said, "It is just as I feared! Two Owls and a Hen, Four Larks and a Wren

Have built their nests in my beard.

EDWARD LEAR.



The human appetite seems to have been a favorite subject with many of Lear's disciples. From the New York Times collection we cull these:

Miss Minnie McFinney of Butte Fed always, and only, on frutte.

Said she: "Let the coarse Eat of beef and of horse,

I'm a peach, and that's all there is tutte."

A cannibal bold of Penzance
Ate an uncle and two of his aunts,
A cow and her calf,

An ox and a half, And now he can't button his pants.

* * *
There was a young fellow named
Sydney.

Who drank till he ruined his kidney.
It shrivelled and shrank,

As he sat there and drank, But he'd a good time doin' it, didn't he?

No sooner had our contemporary published the foregoing than one of its subscribers asserted that no less a poet than Shakespeare invented the rhyme of the Limerick. He referred readers to the following which is sung by Iago in Act III of Othello: And let me the canakin clink, clink;
And let me the canakin clink;
A soldier's a man;
A life's but a span;

Why, then, let a soldier drink.

Limerick rhymsters, illustrate:

* * *
Irregular domestic and sex situations
have always been a favorite with

There was a young lady from Joppa Whose friends all decided to drop her: She went with a friend On a trip to Ostend—

* * *
There was a young fellow from Fife
Who had a fight with his wife.

And the rest of the story's improper.

He lost half his nose, Two-thirds of his toes, One ear, seven teeth—and his life.

There was a young fellow of Lyme
Who lived with three wives at a time.
When they asked: "Why the third?"
He replied: "One's absurd,
And bigamy, Sir, is a crime."

An epicure dining at Crewe,
Found quite a large mouse in his stew.
Said the waiter, "Don't shout,
And wave it about,
Or the rest will be wanting some, too."



From here on the choice covers a wide range:

There once was a sculptor named Phidias,

Whose statues, by some, were thought hideous;

He made Aphrodite
Without even a nighty,
Which shocked all the fussy fastidious.

* * *

* * *
There once was a man of Calcutta
Who spoke with a terrible stutta.

At breakfast he said, "Give me b-b-b-bread And b-b-b-b-b-b-b-butta."

The cautious collapsible cow
Gives milk by the sweat of her brow;
Then under the trees
She folds her front knees,
And sinks fore and aft with a bow.

A tutor who tooted a flute

Tried to teach two young tooters to toot;

Said the two to the tutor,
"Is it harder to toot, or
To tutor two tooters to toot?"

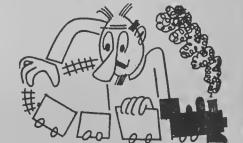
CAROLYN WELLS.

God's plan made a hopeful beginning, But man spoiled his chances by sinning. We trust that the story Will end in God's glory,

But, at present, the other side's winning.

There once were some learned M.D.'s Who captured some germs of disease, And injected a train,

Which, without causing pain,
Allowed one to catch it with ease.



Cartoons from The New York Times.

BIG RED

Continued from page 9

"I want to see Mr. Haggin," he said.
"He'll be down in a few minutes.
Here, Boy."

Robert Fraley snapped his fingers, and the red dog crouched closer to Danny's knees. Danny watched understandingly. The dog wasn't afraid. But he wanted to stay near Danny, and there was a regal something in his manner that told Robert Fraley he was going to stay there. Danny folded his arms and stared stonily out across Mr. Haggin's meadows. He saw Mr. Haggin and another man leave the house, but turned his head in affected surprise when they had come near. Mr. Haggin, a crisp, clipped man in his early fifties, said,

"Hello, Danny."

"Howdy, Mr. Haggin. I found your bull."

"Where?"

"Dead, up on Stoney Lonesome. That big bear got him."

Mr. Haggin looked angry. The big red dog rose, and walked courteously over to greet his master. He returned to Danny.

"Put him back in his kennel, will you, Bob?" Mr. Haggin said.

Robert Fraley grasped a short whip and came over to seize the dog's collar. The red dog strained backwards, and fire leaped in Danny's eyes. He had seen what Mr. Haggin had not. Robert Fraley had twisted the red dog's collar, and hurt him. But the dog would not cry out.

"Can't something be done about that bear?" Mr. Haggin was asking irritably. "He's killed five cattle and nineteen sheep for me so far, and every one a thoroughbred."

"Pappy's been gunnin' for him ten years," Danny said simply. "I been after him myself for five, sinst I turned twelve years old. He's too smart to be still-hunted, and hounds are afraid of him."

"Oh, all right. Here's your two dollars. I'll call on you the next time anything goes astray, Danny."

DANNY pocketed the two one-dollar bills. "The beef lies on Stoney Lonesome," he volunteered.

"I'll see that it's brought in." Mr. Haggin and the other man walked toward the horses, but Mr. Haggin turned around. "Was there something else, Danny?"

"Yes," Danny said recklessly. "What's that red dog of yours good for, Mr. Haggin?"

"Boy? Champion Sylvester's Boy? He's a show dog."

"What's a show dog?"

"It's—it's a sort of like a rifle match, Danny. If you have the best dog in the show you get a blue ribbon."

"Do you waste a dog like that just gettin' blue ribbons?" Danny blurted. Mr. Haggins' eyes were suddenly gentle. "Do you like that dog, Danny?" "I sort of took a fancy to him."

"Forget him. He'd be lost in your woods, and wouldn't be worth a whoop for any use you might have for a dog."

"Oh sure, sure. By the way, Mr. Haggin, what's the money cost of a dog like that?"

Mr. Haggin mounted his horse. "I paid seven thousand dollars," he said, and galloped away.

Danny stood still, watching the horsemen. A lump rose in his throat, and a deadening heaviness enfolded him. Throughout his life he had accepted without even thinking about them the hardships and trials of the life that he lived. It was his, he was the man who could cope with it, he could imagine nothing else. But since he had started playing with his father's hound puppies

a great dream had grown within him. Some day he would find a dog to shame all others, a fine dog that he could treasure, and cherish, and breed from so that all who loved fine dogs would come to see and buy his. That would be all he wanted or needed of heaven.

Throughout the years he had created an exact mental image of that dog. Its breed made little difference so long as it met all the other requirements, and now he knew that at last his dream dog had come to life in Champion Sylvester's Boy. But seven thousand dollars was more than he and his father together had earned in their entire lives.

Danny looked once at the kennel where Robert Fraley had imprisoned the red dog, and resolutely looked away. But he had seen the splash of red there, an eager, sensitive dog crowding close to the pickets that confined him. If only Red was his . . . But he wasn't and there was no way of getting him.

WITH his right hand curled around the two crisp, new bills in his pocket, Danny walked slowly across Mr. Haggin's estate to the edge of the beech woods. He stopped and looked back. Mr. Haggin's place stretched like a mirage before him, something to be seen but never touched. Anything on it was unattainable as the moon to one who lived in a shanty in the beech woods. and made his living by hunting, trapping, and taking such odd jobs as he could get. And seven thousand dollars was an unheard-of sum to one who knew triumph when he captured a seventy-five-cent skunk or weasel pelt.

Danny walked on up the shaded trail that led to his father's clearing. It wasn't rightly his father's; he owned it by squatter's rights only, and Mr. Haggin had bought up all the beech woods clear back to Two Stone Gap. But Mr. Haggin had said that they might live there as long as they chose provided that they were careful not to start any fires or cut any wood other than what they needed for fire wood, and Danny reckoned that that was right nice of Mr. Haggin.

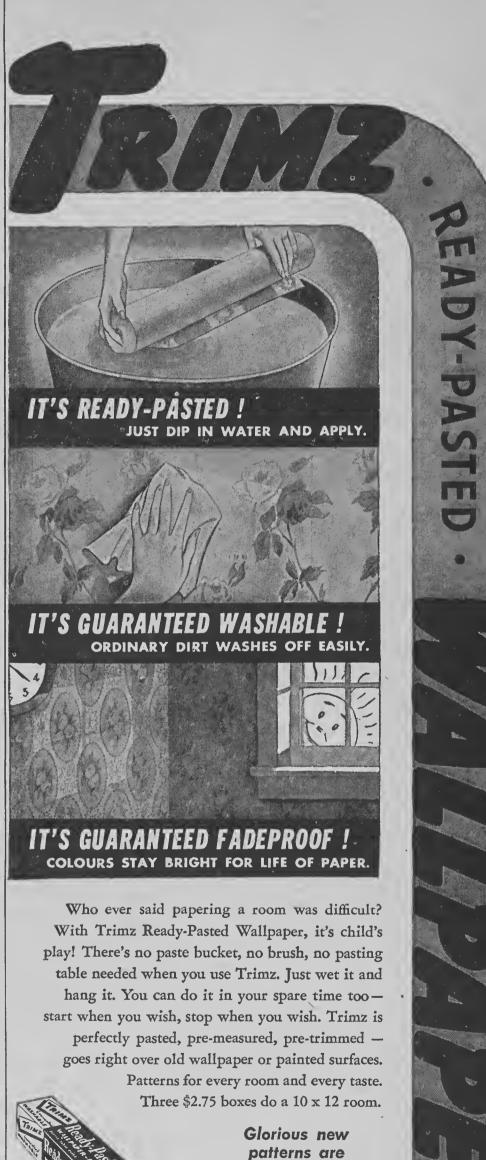
The log bridge over Smokey Creek was suddenly before him. Danny walked to the centre, and stood leaning on the rail and staring into the purling creek. He seemed to see the red dog's reflection in the water, looking up at him with happily lolling tongue, waiting Danny's word to do whatever needed doing. And he could do anything because a dog with brains could be taught anything. He...he was almost human.

The image faded. Danny walked on up the trail to where his father's unpainted frame house huddled in the centre of a stump-riddled clearing. Asa, the brindle mule, grazed in the split-rail pasture and the Pickett's black and white cow followed Asa about. Four bluetick hounds ran to the ends of their chains and rose to paw the air while they welcomed Danny with vociferous bellows. Danny looked at them, four of the best varmint hounds in the Wintapi except that they were afraid of Old Majesty. But they were just ordinary varmint hounds. Danny went up and sat down on the porch, leaning against one of the adze-hewn posts with his eyes closed and his long black hair falling back on his head. Three lean pigs grunted about his feet. The hounds ceased baying.

Just before sunset his father came out of the woods. A wooden yoke crossed his shoulders, and a galvanized pail swung from either end of the yoke. He wiped the sweat from his head and eased the pails down on the porch.

"Forty pounds of wild honey," he said with satisfaction. "It'll bring eight cents a pound down to Centerville."

Danny sat up and peered into the sticky mess that the pails contained.



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"Shouldn't you ought to of waited until fall?" he asked. "There would of

been more in the tree."

"Sure now," Ross Pickett scoffed, "any time your pappy can't find a honey tree you'll see white crows a-flyin' in flocks. They'll be more, come fall."

"I reckon that's right," Danny admitted. "You hungry?"

"I could eat."

Danny entered the house and stuffed kindling into the stove. He poured a few drops of coal oil on it, and threw a match in. When the fire was hot he cooked side pork, and set it on the table along with fresh bread, wild honey, milk, and butter. Ross Pickett ate silently, with the ravenous attention that a hungry man gives to his food. When they had finished both sat back in their chairs, and after a suitable interval Danny asked,

"What's a show dog?"

"I don't rightly know," Ross Pickett said deliberately. "Near's I can come to it, it's a dog that's got more for shape than anything else. They got to be the right distance between their hocks and ankles, and their tail's got to droop just right, and every hair on 'em's got to be in the right place."

"What they good for?"

Ross shrugged. "Rich people keeps em. What you drivin' at, Danny?"

"A dog," Danny breathed. "Such a dog as you never saw before. He looks at you like he was lookin' right through you. The color and line that dog's got, and the brains . . .! It would be worth workin' a hundred years to own a dog like that. Mr. Haggin owns him, and he cost seven thousand dollars."

Ross Pickett's eyes lit up. Then his face sobered and he shook his head.

"Forget it," he admonished. "Mr. Haggin's been mighty good to us. We don't want him mad at us, and he would be if ever we brought trouble to one of his dogs. Besides, he wouldn't be no good if he's a show dog."

"I saw him," Danny insisted. "I should know what he's good for."

"Forget him," Ross Pickett ordered. Night fell, and Danny went to his cot. For a long while he listened to the shrieking whip-poor-wills outside. Finally he fell into a light sleep that was broken by dreams of a great red dog that came up to smell his arm and retreated tantalizingly out of reach. The dog came again, but always ran just as Danny was about to seize it. Finally it climbed a tree, and Danny had climbed halfway after it when a great wind began to shake the tree. Danny rolled sleepily over, and awoke to find Ross shaking his shoulder. His father was excited, breathless, afraid.

"Danny!" he panted. "Wake up! That dog of Mr. Haggin's, the one you talked about! Danny, it followed you home and it's a-layin' outside on the porch now! Get up and take it back! Quick, before Mr. Haggin misses it! We'll have every police in the county after us!"

DANNY pulled on his trousers, draped a shirt over his shoulders, and went to the door. Morning mists hovered over the clearing. The black and white cow heaved herself humpily from her couch by the haystack and Asa drooped his head in the lean of the barn. Lying on the porch's edge was the red dog. He rose and wagged his tail. There was dignity in his greeting, and uncertainty, as though, after having spent most of his life as a scientific plaything, the dog did not know exactly how he would be received by this new person to whom he had come for the companionship that he craved. Danny knelt, and snapped his fingers.

"You come a-visitin', Red?" he crooned. "Come here, Red."

The dog walked over and laid his head on Danny's shoulder. Danny rubbed the silky coat, and squeezed the dog ecstatically. Red whimpered, and licked his face.

"Danny!" Ross Pickett said frantically, "take that dog back to Mr. Haggin! I'm goin' in the woods so nobody won't think I tempted it up here!"

"All right," Danny said meekly.

He watched his father, with the honey pails on the yoke and his beehunting box in his pocket, stride swiftly across the clearing and disappear into the forest. Danny looked down at the dog, and tried to brush from his mind a thought that persisted in staying there. He had always dreamed of having a dog like this as his constant companion. That, of course, was impossible. But Red could be his for the day. Mr. Haggin might put him in jail or something, but it would be worth it. No, he'd better not. He'd better take him right back.

But it seemed that, once started, his feet just naturally strayed away from the trail over the Smokey Creek bridge. That was bothersome at first, and Danny veered back toward the trail. Then after a while he no longer cared because he knew that this one day out of his life would be worth whatever the penalty for it might be. He was afield with a dog that lived up to his grandest dreams of what a dog should be. Besides, Danny felt resentment toward Mr. Haggin, the money-blinded man who would use a dog like this only for winning blue ribbons.

FOR Danny had been right and Mr. Haggin wrong. Red—that hifalutin' handle Mr. Haggin had used was no proper title for a dog—was a natural hunter. He swept into a thicket, and came to a rigid point. Danny walked forward, and two ruffed grouse thundered up. But the dog held his point. Danny knelt and patted his head.

"You've sure seen birds before this," he said.

But, even if Red had been the most blundering fool in the woods, Danny knew that it still would have made no difference. Good hunting dogs were plentiful enough if you knew where to find them, or wanted to take enough time to train them. But a dog with Red's heart and brain — there just weren't any more. Danny looked at the sun and regretted that two hours had already passed. This day would be far too short. With nightfall he simply must take Red back to Mr. Haggin.

They wandered happily on, and climbed the ridge up which Danny had trailed the straying bull yesterday. Red came in to walk beside him, and Danny turned his steps toward the dead bull. If Mr. Haggin hadn't yet sent someone to get it, it was a sure sign that he didn't want it. Danny and Ross could

feel perfectly free at least to come take the bull's hide. Danny broke out to the edge of the glade, and the red dog backed against his knees with bristling hackles and snarling fangs. Thirty steps away Old Majesty stood with both forepaws on his kill. Majesty the wise, the ruler of these woods, too smart to be shot and smart enough to know that Danny carried no gun. The outlaw bear rose on his hind legs, swinging his massive forearms. Danny shrank against a tree, awaiting the inevitable charge. Old Majesty was about to settle once and for all their long-standing feud.

The red dog barked once, and flung himself across the clearing straight at the bear. Danny wanted to shriek at him not to do it, to come back because the bear would certainly kill him. But his tongue was a dry, twisted thing that clung to the roof of his mouth, and he could utter no sound. For one tense moment the bear stood his ground. Then he dropped to all fours, and with Red close behind him, disappeared in the forest.

Danny probed the forest with his eyes, and strained his ears, but could neither see nor hear anything. He turned and ran, back down Stoney Lonesome and through the beech woods to his father's clearing. He flung himself inside the cabin, snatched up his gun and a handful of cartridges, and ran back. For five minutes he stood by the dead bull, watching and listening.

But the forest had swallowed both bear and dog.

Danny tried to stifle the panic that besieged him. It was no longer fear of Old Majesty, or of Mr. Haggin and anything he might do, but he was afraid for Red. When Old Majesty had drawn him far enough away he would certainly turn to kill him. Danny suppressed a sob and went forward to find their trail.

HE found it, leading out of the glade straight toward the back reaches of the Wintapi. Running hard, the bear had bunched his four feet together and scuffed the leaves every place he struck. Danny ran, hating the sluggishness of his feet and the snail's pace at which they carried him. It was his best speed, but the dog and bear were travelling three times as fast. A mile from the glade found where the bear had slowed to a trot, and a half mile beyond that where he had turned for the first time to face the pursuing dog.

A huge, knobby-limbed beech raised at the border of a bramble-thick patch of waste land, and the bear had whipped about with his back to the trunk. Danny's heart was lead as he looked

about for tell-tale mats of red hair or drops of blood. But all he saw was the plainly imprinted tale of how the red dog had come upon and charged the bear. Old Majesty had left his retreat by the beech tree, and with whipping front paws had tried to pin the red dog to the earth. Red had danced before him, keeping out of reach while he retreated. A hundred feet from the tree the bear, afraid to leave his rear exposed while a dog was upon him and a man might come, had gone back. Red had charged again, and once more had danced away from the bear's furious lunges. Then the bear had left the

"He smelt me comin'," Danny whispered to himself. "Red, you're sure playin' your cards right. If only I can stay close enough to keep him runnin', to keep him/from ketchin' you . . . "

But tracking over the boulders was painfully slow work. Sweat stood out on Danny's forehead while, by a broken bramble, a bit of loosened shale, or an occasional paw print between the boulders, he worked out the direction that Old Majesty had taken. The sun reached its peak, and began slowly to sink toward its bed in the west. Danny clenched his hands, and wanted to run. But he knew that by so doing he would lose the trail. And if he did that, Red would be forever lost too.

The first shades of twilight were darkening the forest when Danny finally crossed the boulders and was again among trees. He found the bear's trail in the scuffed leaves there, and with his rifle clutched tightly to him ran as fast as he could along it. Old Majesty had climbed straight up the long, sloping nose of a hump-backed ridge and had run along its top. Then he had dipped suddenly down into a stand of giant pines. Black night overtook Danny there. He bent over, painfully picking out each track and following it. When he could no longer do that, he got down on his hands and knees and tried to follow the trail by feeling out each track. But that was impossible.

"Keep your head, Danny," he counselled himself. "You can't do nothin' in the night."

He sat down with his back against a huge pine, straining his ears into the darkness for some bark or snarl, something that might tell him where the bear had gone. But there was only silence. A dozen times he started up to peer hopefully about for dawn. But the night was a thousand hours long. Not able to sleep he sat against the tree looking into the night-shrouded maze of lost valleys and nameless canyon into which the bear had gone. Then, after an eternity, a grey shaft of light dropped through one of the pines to the needle-littered earth. Danny leaped to his feet. By bending very close to the earth he could see and follow the tracks. And, as daylight increased, he could run once more. He followed the trail down the mountain, and up the side of another one. Along its crest he went, down and up another mountain. And it was from the top of this that he heard a dog's bark.

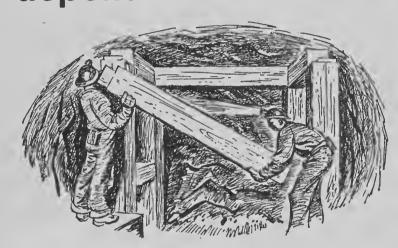
Danny stopped, let his jaw drop open the better to listen. The bark was not repeated, but there had been no mistake about hearing it. Danny looked down into the wide, boulder-studded valley that stretched beneath him, and put his fingers into his mouth preparatory to whistling. But he stopped himself in time. If the bear and dog were down there, a whistle or sound would only warn Old Majesty that he was coming, and would send him off on another wild chase. Danny studied the valley carefully. The trees in it were only saplings and fire cherries, but the boulders were huge. The bear would make his stand against a boulder rather than one of the small trees. Danny scrutinized each boulder and selected the one from which he thought the dog's bark had drifted.



"That was sure a bad wind last night!"

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But he had to go very carefully now, very slowly. A wrong move, a misstep, and everything would be ruined. He walked down the mountain. Once on the valley floor he dropped to his hands and knees and crawled, placing each hand and foot carefully, cautious that his clothing should brush against no branch or twig that might make a sound. A hundred feet from the boulder he had chosen, he peered over a small rock and saw Old Majesty.

THE COUNTRY GUIDE

PERCHED on a shelf of rock, the bear was five feet from the ground. Huge, monstrous, a presence rather than a beast, his great head was bent toward the ground. Danny saw Red, lying on the ground ten feet before the bear, raising his head suspiciously every time the bear moved, ready to charge or retreat. Danny's hands trembled when he levelled his rifle over the little rock. This was a heaven-sent chance.

Ross had told him that a show dog must be no less than perfect, and there was one chance in fifty of killing that huge bear with a single shot. He would come toppling from his perch with snapping jaws and slashing paws. Red, knowing that at last he was reinforced by the man for whom he had waited, would be upon the bear. Not long, just long enough to get a ripped foot or a slashed side before Danny could send home the shot that would kill the bear. Just long enough to make him entirely useless to Mr. Haggin, to give Danny a chance of getting him. Danny sighted. Then he took his rifle down and crawled around the little rock.

He slithered over the ground, crawling forward with ready rifle held before him, and was twenty feet from the boulder when Old Majesty, all of whose attention had been riveted on the dog, looked up. The rank odor of the great bear filled Danny's nostrils, and for a moment he looked steadily into the eyes of his ancient enemy. Then Red was beside him, backing against Danny knees, still looking at the bear. Danny's left hand reached down to grasp the dog's collar, his right brought the rifle up.

But Old Majesty slid off the back end of the boulder and was gone.

With the dog beside him, Danny started back up the mountain, but early twilight had come again when he and Red got back to Mr. Haggin's estate. Danny scarcely knew that his clothing was in tatters, that he was gaunt from lack of sleep and food. He knew only that he had brought Mr. Haggin's dog safely back. They went to the barn, and Robert Fraley came running from the house.

"Where have you had that dog?" he raged. "Half the estate's looking for him!"

He came close, Red backed against Danny's knees and growled. Robert Fraley pivoted, went to the barn and and snatched a whip from its peg. He strode back to Danny and raised it.

"Don't hit that dog," Danny warned. "Why, you . . ."

Danny lashed out with his right fist and smacked Robert Fraley squarely on the chin. The overseer fell backward, sat in the dust supporting himself on both hands, and blinked. Then he rose, and stepped back to clench his fists, when someone said,

"The war's over, Bob. You can go."
Danny turned slowly, and saw Mr.
Haggin leaning against the barn. There
were tears in Danny's eyes, and he
was very much ashamed that anyone
should see him cry. But he could do
nothing else except kneel and put
both arms around Red's neck.

"Nobody hits this dog where I can see it," he sobbed. "He, he's honest and clean, Mr. Haggin. He couldn't do a wrong thing, and nobody hits him for doin' right."

"Bob's a good man," Mr. Haggin was saying. "He'll see that things get done, and he has a lot of knowledge. But

there are things he could learn about animals."

Danny stood erect and wiped the tears from his eyes. He was a man, and must act the part.

"I fetched your dog back, Mr. Haggin," he said. "He tracked that big bear to a standstill, the only dog with the heart to do it and the brain to handle the bear after he did. But I didn't shoot the bear, though I might have. You can still have a blue ribbon with Red. Feel him over yourself. Nothin's marred."

"No," Mr. Haggin said, but he was looking at Danny instead of the dog. "I guess nothin's marred. The dog isn't scratched and probably he might have been. Danny, how would you like to go to New York?"

Danny looked at Mr. Haggin, and for the first time saw him as something apart from the great Wintapi estate. He was a man, too, one who could love and understand a great dog, and see him as other than just a device for winning another blue ribbon. Somehow Danny knew that without having been there, Mr. Haggin knew just about what had happened in the Wintapi wilderness.

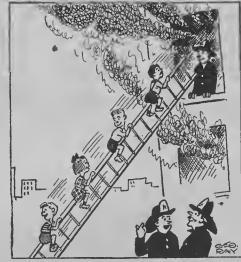
"With the dog," Mr. Haggin continued. "Bob Fraley's going to show him, and I'd like you to be along to sort of learn how it's done. Then I'd like to have you bring him back, and keep him at your house in the beech woods. He'll be the beginning of a long line of champions for the new kennels I'm planning and I believe you are the one to take charge of them. You see, I sort of like to have fine things around me, Danny, and I haven't time to take care of all of them myself."

"I couldn't do it," Danny said gravely.
"Red, he's a fightin' dog, Mr. Haggin.
Mebbe I wouldn't allus be with him,
and he might get clawed or chawed.
Then he'd be good for no more shows."

Danny stood breathless, awaiting Mr. Haggin's certain agreement. But his eyes lighted up and a happy smile broke on his face when Mr. Haggin said, "Don't let that worry you, Danny. Take your dog up in the beech woods, and get yourself some sleep. Then come down, and I'll have Fraley give you some pointers on what he's going to do."

THE sun rose over Stoney Lonesome, and hung like a burning balloon in the sky as Danny danced up the Smokey Creek trail. The savage, silent, head-swinging bear still roamed the Wintapi, an implacable, hating enemy of all humans who trod there. But the bear was like the snows that piled up, the gales that roared through the forest, the occasional fire, all the things that those who lived in the Wintapi had to accept as a matter of course and deal with as best they could. The Wintapi could be a hard and lonely place.

But, hard as it might be, it would never again be lonely. Danny shook his whirling head, trying to arrange in some order the events that had brought about this miracle. He looked at the great red dog pacing beside him, and when he was safely screened by the



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forest knelt to pass both arms about Red's neck and hug him tightly. To be sure it was not his dog in the same sense that the mule, the hounds, and the four pigs were owned by his father. But as Red's caretaker he would naturally keep the dog with him; Mr. Haggin himself had said that.

Danny whirled into the clearing, waltzed with Red up the shanty steps, and burst through the door. Ross's rifle and belt of cartridges leaned beside it. A made-up pack lay on the table, and his father was lacing a pair of hiking moccasins on his bare feet.

"Pappy, I'm goin' to New York!" Danny bubbled happily.

"You're what?"

DANNY sat breathlessly down on a chair. Red padded over, laid his head on Danny's knee, and turned his eyes to watch Ross, as though trying to fathom the welcome that he might expect from this other occupant of his new home. Outside, the four chained hounds whined uneasily and Asa sent an ear-splitting bray screaming across the pasture. Danny tickled Red's ear, and the big setter sighed happily. Starry-eyed, Danny stared at the shaft of sunlight streaming through the open door, and his feet seemed to be carrying him step by step back up it. He was jarred back to earth by Ross's gentle, "Speak sensible, boy."

"Yes, Pappy. I'm goin' to New York." "That ain't sensible."

"But I am!" Danny insisted. "Mr. Haggin's sendin' Red down there to a show. That Fraley, he's takin' him and I'm goin' along to watch!"

'Sure, you're funnin' with me."

"I'm not. I was goin' to take Red back to Mr. Haggin, Instead, he lit out after that big bear that's been plaguin' us for so long. I had to find him. Red run that bear right to a standstill!"

"That dog run Ol' Majesty to a standstill?"

"Yes, sir."

"I hardly believe it," Ross breathed. "Go on, Danny."

"Red had the bear on a rock, way back in the pine valleys," Danny continued. "I could of shot, but didn't on account I knew the bear'd tumble off the rock and hurt the dog. So I caught up the dog and took him back to Mr. Haggin. That Fraley, he started a fuss. Then Mr. Haggin come. He said he could see the dog wasn't hurt. Then he told me that he was startin' a new kennel, and I was the one to take charge of it! First thing I got to do is go to New York and see Red in the dog show. Then I'm going to bring him back and we're going to keep him here."

Ross said, "That do beat all!"

He sat staring at the floor, but when he turned his eyes on Danny pride and pleasure lighted them. A wandering trapper most of his life, he had settled in the Wintapi twenty years ago. He knew his own handicaps and limitations, and since Danny was born he had striven desperately but hopelessly to give him some of the better things. Danny was not just a trapper. He was like his dead mother, with all her charm and intelligence. The pride in Ross's eyes increased. Quality, whether it was in man or dog, just couldn't be hidden.

"Pappy," Danny asked seriously, "why do you think Mr. Haggin wants me to go?"

"I dunno, Danny. Mebbe he figures you're goin' to be a good enough dog man to handle his dogs at them big

Ross looked thoughtfully at his son. Danny had been a natural dog handler since babyhood, and if he could have an opportunity such as this . . . Ross had been around enough to know that people who handled rich men's dogs could make more money in a year than some trappers made in a lifetime. They could be somebody, too.

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"Get some sleep, boy," Ross advised. "Your eyes are redder'n an old coon's that's been runnin' the cricks three nights straight."

"I'm not tired."

"Of course you're not. You ain't been up but two days and two nights. If you're goin' to New York with Red, you got to be ready. Lie down a bit of

DANNY lay down on his bed and Red curled up beside it. Danny's hand trailed over the side of the bed, feeling the big dog's furry back and assuring himself that it was really there. Ross put the yoke across his shoulders, hung his empty honey pails on it, closed the door softly behind him, and went into

Danny awoke with a start. The smell of frying pork chops tickled his nostrils. Red was sitting in the doorway, happy tail thumping the floor. Ross stood over the kitchen stove, turning pork chops in a skillet, and the long shades of evening were stealing across the clearing in the beech woods. Danny sprang out of bed, and looked at the windows.

"It's night!"

"Sure," Ross grinned. "For a man who wasn't tired, you did right well. That big red dog has been sittin' there watchin' me for the whole hour I been home. I think he would of bit me if I'd woke you."

Red trotted back to Danny, buried his muzzle in Danny's cupped hand, and sniffed. Danny looked away, and Red bumped his forehead gently against Danny's wrist, demanding more attention. Ross looked proudly from Danny to the dog, and his eyes drank in all the things that a born dog man will see in a fine dog.

"He's goin' to be the best varmint dog we ever had, Danny," he finally pronounced.

"Varmint dog?"

"Sure. You ain't just goin' to keep him in the house. That dog's got to hunt. It's born in him."

"I reckon you're right, Pappy."

Danny swung out of bed, crossed the floor to the two tin pails that stood on a wooden shelf, and poured a basin full of water. He washed his face and hands, and tried to bring from among the thoughts in his mind one that sought expression. But he could not quite find it. Red a varmint dog. . . . Of course he would be a very good one, or he never could have bayed Old Majesty. A frown crossed Danny's brow, and he sat down to eat the fried potatoes and chops his father had prepared. Red caught a piece of meat tossed to him, and swallowed it daintily. Ross watched

"I'm right proud," he said, "to have a dog like that around. He's goin' to do a lot for us, Danny."

"I reckon he is."

"Yes, sir," Ross said profoundly. "We'll get more varmints this year than we ever had before. Is Mr. Haggin goin' to pay you anything for his keep?"

"Gee. I dunno."

"He needn't," Ross observed. "Such a dog will pay for his own keep, and ours too. By the way, one of Mr. Haggin's hired men was up here about two hours past. He wants you should bring the dog down, come mornin', so you can go to New York."

"He did? Then I guess we're really goin' after all, Pappy."

"You sure are. You'll see a heap of sights in New York, Danny. I come close to goin' there once, for a pelt man. But I couldn't abide in a city."

"I couldn't either."

"I know it, Danny. But you can go there sometimes without hurtin' you. If you're finished, take your dog out and get him acquainted. I'll wash the dishes."

With Red trailing at his heels, Danny walked through the door into the evening twilight. The four chained hounds sulked beside their kennels. Old Mike, leader of the pack, raised his lips to disclose long fangs. Red trotted stiffly up, and Mike came stiffly forward. The two dogs sniffed noses and Mike, who knew a superior when he met one, sat down to watch with mournful eyes while Red nosed around an inviting patch of briers. A rabbit burst out of them, and went scooting toward the forest with Red in close pursuit. Forgetting their resentment, the four hounds bayed thunderous encouragement. The rabbit dived into a hole beneath a pile of rocks.

Danny watched critically. It was an amateurish exhibition in a way. Red had a good nose but lacked experience. Old Mike would have known that the rabbit was faster than he, and would have worked out a ruse to try and catch it by strategy. But Red was fast and smart. He would learn anything a dog could learn.

Danny took him over to the pasture. The black and white cow, feet braced and head extended, stared at this newcomer into the Pickett domain. The mule, customarily indifferent to everything except food, ignored Red and went right on cropping the short grass. Danny swung for a short walk in the woods, and when they returned to the shanty Ross was sitting at the table sharpening fish hooks. He looked

"How'd he do?"

"All right. He needs some smartin' up, but he'll do good."
"Sure he will. You best get some

Danny stifled a yawn, "I got up just four hours past."

"You could still sleep some more."

Danny folded an old quilt, and spread it on the floor near his bed. He took off his clothes and lay down, again letting his hand trail over the side of the bed and caress the big setter's back. He wasn't sleepy; a man who had slept from dawn to dark just couldn't be. Red sighed happily, and Danny wriggled on the bed. Slowly he faded into sound slumber, until he was awakened by the sound of Red's toenails clicking on the uncarpeted floor. The big dog padded to the door, and then came back to rear on the bed and nudge Danny's shoulder with his muzzle. Danny rolled over and sat up. Bright sunlight streamed through the window. A chattering flicker's strident call rattled through the morning.

DANNY swung out of bed, started a wood fire in the kitchen stove, and mixed pancake batter in a bowl. Ross stirred sleepily, and came into the kitchen to wash his face and hands in the tin basin. They ate breakfast, and Red expertly caught the bits of pancake Danny tossed to him. Danny picked up his fork, and drummed on the table's edge with its handle.

"You ever been to a dog show, Pappy?"

"Nope. Never have. But now that I'm older, it's often my wish that I had gone around to see more things when I was young. Whyfore you fidgetin',

"I dunno."

Ross grinned, "Put on your good clothes and pack your baggage. Then git on down to Mr. Haggin's. I'll take care of things here."

"I can't leave you with all the work!" "Nine dishes to wash off," Ross scoffed. "Git goin'."

"Well, all right."

Danny donned his one presentable suit of clothes, painfully knotted a bright blue tie about his throat, and packed Ross's worn carpetbag. He stood stiffly before the door, with his hand on the knob, and Ross glanced at him with studied unconcern.

"I'll see you when you come back. Good luck, Danny."

Danny gulped, "Thanks, Pappy. I ain't afraid."

"I know you ain't. New York's goin' to seem a funny place. But just remember that a smart hound'll make out no matter where he hunts, given he keeps his nose to the wind. I'll rub a rabbit's foot for you."

"I'll try to do good. So long, Pappy." "So long."

DANNY walked out the door, and Red leaped happily up to pad beside him. A squirrel flashed across the trail, and Red sprang at it. The squirrel ascended a tree, and balanced saucily on a swaying branch while Red bounded on down the trail to overtake Danny. A buck snorted from a thicket, and farther down, near the border of the beech woods, some of Mr. Haggin's finely bred young calves raised their heads to stare. Danny broke into the edge of the clearing, and Red fell in beside him as both slowed to a sober walk. Mr. Haggin and Robert Fraley stood together near the barn. Danny came close, and stood without speaking while Red sat on the ground with his back against Danny's knees. Mr. Haggin turned to smile.

"Good morning, Danny."

"Mornin', sir."

"Turn the dog over to Bob, will you? I want to talk with you."

"Yes, sir."

Robert Fraley came forth with a short leather leash. Red backed closer to Danny's knees, and turned to look appealingly up. The overseer snapped the leash on Red's collar, forced him to mount a small wooden bench that stood against the barn, and snapped the other end of the leash into an iron ring. He entered the barn, to come out with a pair of clippers and a pair of shears. Danny looked questioningly at

"He's only going to be trimmed," Mr. Haggin said. "We're leaving for New York at noon."

"Yes, sir, Pappy told me."

Mr. Haggin laughed. "He did, eh? Come on along, Danny."

His head turned slightly so he could see Red, Danny followed Mr. Haggin toward the barn door. Alert and erect, Red strained at the leash and kept his eyes on Danny. Then, just as Danny disappeared, the big red dog sighed and relaxed to let the familiar shears creep about his neck. Mr. Haggin entered a small office, sat down in a swivel chair, and motioned Danny into another one. He took a package of cigarettes from his pocket and extended them. Danny shook his head.

"No thanks. Pappy, he don't hold with either smokin' or drinkin'."

Mr. Haggin said thoughtfully, "The more I know of your father, the more I respect him." Then, "Danny why do you suppose I turned Boy over to you, and am asking you to go to New York?"

"I don't rightly know."

"No, I don't suppose you do. But some wise man did a neat turn with an old axiom when he said that if a man is known by the company he keeps, a company is known by the men it keeps. Throughout my whole life I've seldom bet on anything but men, and I've seldom lost. I'm betting on you now."

"I don't know if I can do things for

"That's my worry, Danny. I'm getting to the time of life when I can let others handle business affairs and devote my attention to the things I really like. One of those things is dogs, fine dogs. And I want you to help me. Five years from now I expect that you'll be taking my dogs, or rather our dogs, to shows and field trials all by yourself. What do you say, Danny?"

"I'll work very hard."

"I know you will, and you're going to have to work very hard. There are endless things you have to learn, and your education starts right now. I'm sending only Boy to this show, and Bob Fraley's in complete charge. You're going along to learn. Now I want to ask you a question; exactly what do you think of dog shows?"

"They seem like a piddlin' waste of time," Danny confessed.

"Danny, you're wrong. You would be entirely right if all a dog show amounted to was a bit of ribbon, or a cup, and a boost to the owner's pride. But there's more than that in it, much more. In one sense you could think of it as part of the story of man, and his constant striving toward something better. A dog show is illustrative of man's achievement, and a blue ribbon is more than a bit of silk. It's a mark, Danny, one that never can be erased. The dog that wins it will not die. If we send Boy to the show, and he comes back as best of breed, then that's something for all future dog lovers and dog owners to build on. Don't you see? A hundred years from now someone may stand on this very spot with a fine Irish setter, and he'll trace its lineage back to some other very fine setter, perhaps to Boy. And he will know that he has built on what competent men have declared to be the very best. He will know also that he, too, can go one step nearer the perfection that men must and will have in all things. It did not start with us, Danny, but with the first man who ever dreamed of an Irish setter. All we're trying to do is advance one step farther and Boy's ribbon, if he wins one, will simply be proof that we succeeded."

"I see," Danny breathed. "I never thought of it like that before."

"Always thing of it that way, Danny," Mr. Haggin urged. "If you do, one day I'll see you as a leading dog handler. I'm sending Boy in the station wagon. I suppose you'd like to ride with him?"

"I'd sort of like to keep him company."

"I thought so," Mr. Haggin laughed. "When you come back at the end of the week I'll give you your first month's

"Wages?"

wages."

"Yes, your beginning pay as a kennel man for me is fifty dollars a month. I'll increase that whenever you're worth an increase."

"Gee, Mr. Haggin, that's an awful

MR. Haggin said crisply, "Suppose you go out and watch what Bob's doing. I'll see you in New York."

"Yes, sir."

Danny walked out of the barn, and stopped at the edge of the door to watch. Something was wrong on the wooden bench. Red was still there, and Robert Fraley was working over him with clippers and shears. But something that Danny had seen in the big dog was no longer there. Then a little wind played around the corner of the barn, and the illusion faded. Red's head lifted, he wagged his tail, and made a little lunge on the bench. Robert Fraley turned irritably around.

"Listen, kid, I've got orders to take you along. But I've also got orders that you're going only to watch. Don't stick your bill in unless it's asked for."

Danny said bluntly, "I ain't aimin' to bother you."

He sat quietly in the grass, watching the shears work smoothly around Red's throat. Golden-red hair came off in little wisps and bunches, and Robert Fraley retreated ten feet to stand critically inspecting his work. Danny looked from the handler to the dog. Red's throat was cleaner, straighter, and the fine curve of his neck a little more pronounced. His ears, trimmed, looked a little longer than they had and clung more tightly to his head. Danny said.

"You left a little raggedy patch, there just back of his right ear."

"I suppose you could do a better





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"I didn't say that. I just said you left his right ear raggedy."

"Well, I saw that myself, kid. And I told you before not to stick your bill in until it's wanted."

Robert Fraley finished trimming the ragged ear, and disappeared inside the barn. Danny stole forward to pick up a tin pail that was set under a dripping faucet, and gave Red a drink. The dog lapped thirstily, and Danny tickled his ear with one finger while he stared resentfully at the barn. That Fraley, he might know all about dog shows and such things, but he didn't even know enough about dogs to offer one a drink on a hot day. Danny put the pail back under the faucet, and retreated to his seat in the grass as Robert Fraley came out of the barn. A shining station wagon purred down from the house, and a uniformed chauffeur took a cigarette from his mouth to grin at Danny.

"You going, kid?"

"Yes, sir."

"Well, get in."

Danny said firmly, "I'll wait for the dog."

"Well, don't say you weren't invited."

ROBERT Fraley unsnapped Red's leash, led the big red setter to the station wagon, and permitted the leash to drag while Red climbed in to take his place in one of the back seats. Fraley sat down beside the chauffeur, and turned to look snappishly at Danny.

"Are you coming? Or shall I put a leash on you too?"

Danny said slowly, "You can try it if you're feelin' awful fit."

He squeezed past the front seat into the back, while the station wagon purred away from Mr. Haggin's Wintapi estate down to the black-top road leading to it. They went from that to macadam, and on for hour after hour while the rolling countryside swept past. Danny sat still, gazing through the window, raptly attentive to everything. He had never been out of the Wintapi, or more than forty miles from the shanty in the beech woods, and a man didn't really know what the world was until he got out to see it. They came to a city, but the station wagon rolled right through.

Late that evening they finally crossed the Pulaski Skyway. Red slept beside him, and Danny looked blankly at all the lights that seemed to be New York at night. They were everywhere, some low to the ground and some so high in the air that it was a wonder a man could climb that high to put in a light. Still puffing one of his innumerable cigarettes, the chauffeur turned around.

"That's the big place, kid."

"Yes, sir."

Red stirred, and lifted his head in the darkness to nudge Danny's hand. Danny pulled his ears, and swallowed the lump in his throat. This, exactly as Ross had said, was fine to see. But he seemed to be feeling the little breezes that played in the Wintapi at night, and hearing the night sounds that drifted out of the beech forests. He belonged there, along with Ross, Red, and everything else that was truly at home in the Wintapi. But he could still come to New York sometimesprovided Red came with him. The chauffeur threaded an expert way through the streets, weaving in and out of the traffic that clogged them, while Danny stared in wide-eyed wonder. The station wagon rolled to a stop before a big, lighted building and without speaking Robert Fraley got out to lead Red inside.

The chauffeur lit another cigarette, shielding the match with his hand, and leaned back to puff luxuriously. Danny stared anxiously at the building into which Robert Fraley had taken Red, and looked questioningly at the chauffeur.

"I got orders to deliver you to Hag-

gin's town house, kid," the chauffeur said. "I hope that dog don't get hydrophobia and bite Fraley. If he does, Fraley's sure going to bite you."

"He don't like me," Danny said gravely. "I hit him in the chin."

"You did?" the chauffeur grinned. "I always miss the nicest things that happen."

"Are we comin' back here?" Danny asked anxiously.

"Oh, sure. Haggin'll bring you back; he wants you to see the show. Don't worry about your goulash hound."

"It's a setter," Danny corrected.

"Well, don't worry about your setter then. Let's go."

Again the station wagon purred into life, and the chauffeur wove his way through crowded streets to a house that was one of a row of brown-stone houses. He got out, and Danny followed with his carpetbag while the chauffeur ascended a flight of stone steps, guarded by stone lions, and pressed a button. The door opened, and a butler stood framed in the light.

"Hi, Bill," the chauffeur remarked cheerfully, "I'm back from the wilds with a wild man. Haggin said turn him over to you."

The butler said primly, "Mr. Haggin has not yet arrived, but I shall be happy to care for you, sir. Will you please follow me?"

He reached down for Danny's bag but Danny grinned and picked it up.

"I can carry my own parcels."

He followed the butler through a hall, and up a flight of polished stone steps into a room. Danny put his bag down and stared. The room, with a canopied bed in the centre, was half as big as the shanty where he and Ross lived in the beech woods.

"Will you have dinner in your room, sir?" the butler asked.

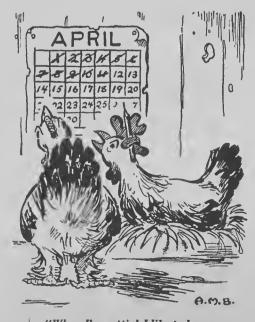
Danny gulped. All this for him seemed hardly real or right. But he was hungry. A little pang assailed him. Neither he nor Red had eaten since morning, and Red was probably hungry too, Danny smiled at the butler.

"I'd take it right kindly if you brought me some vittles, sir."

The butler smiled back, and his stiff formality seemed to leave him. He winked at Danny.

"I'll bring you some. Go ahead and wash up. What would you like to eat?"
"Uh . . . Uh . . . Pork chops are always good."

THE butler left and Danny entered the bathroom to wash his face and hands in the porcelain basin. For a long while he stood pleasurably watching the cold water run out of the faucet. His mother, whom he could remember only dimly, had never had such marvels to serve her, and he and Ross got their water from a pump. But the beech woods was still a good place, and a man couldn't rightly expect to have everything. He dried his



"When I'm settin' I like to know what I'm doin'!"

face, combed his wet hair, and reentered the bedroom to find a table set, the chair ready. He ate hungrily, gnawing the last shreds of meat from the pork chops and crunching the last of a small mountain of French fried potatoes. He would, he guessed, have to learn to make such potatoes himself so Ross could enjoy them too. For a few minutes he sat idly looking out of the window, until the butler came to take the table away.

Danny took off his clothes and lay down on the luxurious bed. The room seemed to whirl about. Red was looking anxiously at him, pleading with soft eyes and gently wagging tail. Danny turned over, and closed his eyes to shut the vision out. But he couldn't. He sat up in the darkness, resting against the bed's head-board. All he knew was that, if Red was suddenly taken away from him, neither he nor Red could be happy again. That Fraley, who understood the fine points of dog shows without coming even close to understanding dogs

Danny shivered, and slid back down into the bed.

LL night he lay on the soft bed, A sometimes dropping into a fitful doze but for the most part staring at the dark ceiling. Occasionally his thoughts turned to Ross, and the shanty in the beech woods, and at such times Danny moved restlessly. Probably Ross would know exactly what to do, and how to go about doing it, but the only parting advice he had given Danny was that a smart hound could hunt anywhere if he kept his nose into the wind. Danny squirmed, and tried to quiet the thoughts that tormented him. Mr. Haggin must have known what he was doing when he appointed Robert Fraley to show the dog. Just the same . .

Danny remembered vividly the trimming bench in the Wintapi. Red had been under Fraley's hands then, and he had been only an animated statue instead of a dog. The wonderful thing that lived in Red, and made him what he was, just didn't show when Fraley was handling him. The first grey streaks of dawn stole through the windows, and outside the quiet street came to life. Danny dropped into a dreamtroubled sleep.

He was awakened by the sound of

music, playing through a loud-speaker in the wall, and sprang up in bed. For a moment he rubbed his eyes, and looked bewilderedly about the room in which he found himself. Some of the notes coming from the radio were almost exactly like those of the bellthroated thrush that used to sing outside his window when early dawn came to the Wintapi. He oriented himself and swung his bare feet to the floor. This wasn't the Wintapi. It was New York. Red was here to win a blue ribbon so that for all time to come sportsmen who loved dogs would know how fine he was. Danny was here, if for nothing else, to cheer while he won it. He entered the bathroom, washed, and was knotting the blue tie about a clean shirt he had taken out of the carpetbag when someone knocked softly on the door. It opened a crack, and Mr. Haggin called cheerfully.

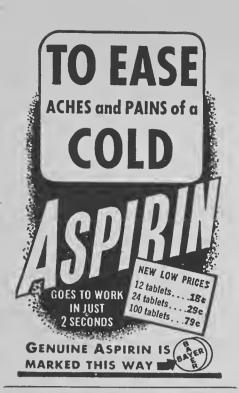
"Good morning, Danny. How goes it? Sleep well?"

"Fine, sir."

Mr. Haggin entered the room and sat down on the edge of the bed. He lit a cigarette, puffed twice on it, and pinched it out. His shoe beat a nervous little tattoo on the floor. Danny looked at him, and away again. Mr. Haggin, obviously bothered by something, rose to pace around the room and again sit down on the edge of the bed.

"How do you like New York?" he sked.

"I haven't seen much of it."





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Mr. Haggin laughed. "A good enough answer." For a moment he was silent. Then he said, "Danny, Boy's going up today. And, let me tell you, he's going to fight for any wins he makes. The best Irishmen in the country, and some from other countries, are here. But, Danny, if Boy can win his three points today, we'll have a champion!"

Danny knitted a puzzled brow, "I thought he was that before."

"No," Mr. Haggin admitted. "I always called him champion, and thought of him as such, but he isn't written as champion into the records of the American Kennel Club. You see, according to the competition he meets, a dog can win points at every show. He has to win two three-point shows under different judges, and nine other points, before he is officially a champion. Boy has his nine points, and one three-point show. He can win five points at this show. He's got to win three!"

"How are such things rated?" Danny

"By the general excellence of the dog. A judge will examine his head, eyes, ears, neck, body, shoulders and forelegs, hind legs, tail, coat and feathering, color, size, style, and general appearance, and rate him accordingly. If two dogs are equal physically, the one with the most 'dog personality' will win. I want you to watch the judge, and the handlers with their dogs, and ask me any questions you care to while the judging is in progress. You'll learn that way. Danny, Boy's as good as any Irish setter in the show!"

"I know that, sir."

MR. Haggin was looking at him, and Danny felt strangely drawn to the older man. They were not a wealthy dog fancier and his apprentice handler, but two men who could be brought very close by a common bond—the love of a good dog. Danny licked his dry lips. You could get all the best dogs from all over, and have every hair in place on every one of them, and if they were all exactly alike two or three would still stand out and one would stand out from those. That thing Mr. Haggin had referred to as dog personality . . . Maybe every dog had it, but had no reason for revealing it.

"Do you s'pose we can see Red before the show?" Danny asked.

Mr. Haggin coughed nervously and looked away. "I'm afraid not. Bob always likes to handle a dog without interference, especially on a show day. You can see him right after the show."

"Yes, sir."

"Come on down and have some breakfast," Mr. Haggin urged. "We'll both feel better. Doggonit, Danny, I'm as nervous as a sixteen-year-old going sparking for the first time."

They ate, and Mr. Haggin retreated to an inner office to conduct some business of his own while Danny roamed about the house. Pictures of horses and dogs lined the walls of one big room, and on the mantelpiece Danny found a small folder containing one worn snapshot. It was of a fifteen-yearold boy, with bare feet thrust out of tattered overalls, and a cane pole in one hand and a string of sunfish in the other. Danny peered closely at it, and held it up to the light. When he replaced it on the mantel he knew that it was a boyhood picture of Mr. Haggin. The lord of this luxurious manor and the great Wintapi estate had not, then, always been wealthy.

Danny sat down on a sofa, looking about at the books, the pictures, the trophies, all the things that throughout the years Mr. Haggin had gathered. He leaned back to close his eyes, and thought curiously that he was no longer the same person who had come out of the Wintapi. He had learned, and with added knowledge seemed to have grown. He thought of



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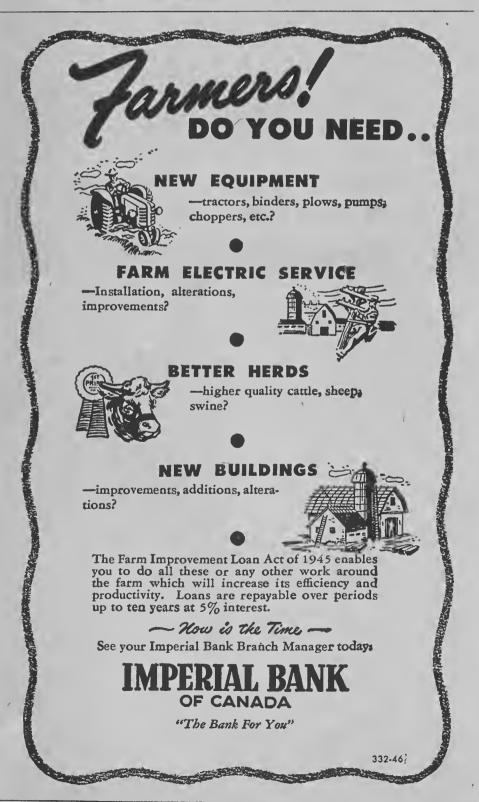
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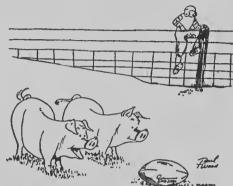
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Red, and his eyes glowed. Back in the Wintapi, no matter what it looked like, a dog was esteemed according to its hunting ability. But to have a dog with hunting ability, and all the brains, the courage, and the heart that a dog like Red had too! If such dogs came about as a result of competitive dog shows, then certainly only a fool would scoff at or belittle them.

Danny's eyes clouded, and again he seemed to see Red beside him, in trouble and needing help. He rose to pace about the room, peering into wall cases at Mr. Haggin's books and trophies. If only he was back in the Wintapi he would know exactly what to do and nobody could tell him that he was just an onlooker. Danny clenched and unclenched his hand. Try as he would to



"Pop turned out to be just an old windbag!"

please Mr. Haggin, he could not feel like just an onlooker here either. Red had something great at stake, and Danny must help him triumph.

It was an eternity before the butler came in to announce lunch. Mr. Haggin was more composed, but an excited little light that he could not control still danced in back of his eyes. Danny ate broiled steak, mashed potatoes, asparagus, and a wonderful kind of pudding that floated in whipped cream. He made a mental note to enquire about that kind of pudding, so he could make some for Ross when he got back to the Wintapi. He looked up as Mr. Haggin started to speak.

"As I've already told you, Danny, the basic idea of a dog show is to determine the best dogs. It's really an elimination contest, with the inferior dogs being weeded out and the best one winning the awards. Naturally you can't take seventy-five dogs, throw them all together, and pick out the best. So the dogs are divided into classes. The puppy class is open to any qualified dog more than six months and less than one year old. No imported dog, except those from Canada, may be entered in that class. The novice class is open to any dog that has not won a first prize at an American Kennel Club show, and a surprise winner often comes from it. The limit class is open to any dog except A.K.C. champions, and imported dogs may enter it. The winner's class, of course, determines the best of winners. As a rule, dogs and bitches are judged separately. Do you know why?"

"I think so," Danny answered gravely.
"They aren't alike. A dog wants to be big, strong, and husky, same's a man. A bitch can be strong but . . . There's the same difference between them as there is between a woman and a man. It would be hard to judge them together."

"That's right," Mr. Haggin nodded approvingly. "Although of course the winner's dog competes with winner's bitch for best of breed. But there's another class, the open, and Boy's entered in that. The open's where you usually find the hottest competition, and it's certainly here this time. Imported dogs may enter it, and Art Maugin came from London with Heatherbloom." Mr. Haggin closed his eyes. "Wait until you see Heatherbloom, Danny. He moves like a flame. and except for Boy is the finest Irish setter I've ever seen. Are there any questions you'd like to ask?"

"I can't rightly think of any," Danny

admitted. "Probably I will after I've seen the show."

"Then let's go. Every man has a right to his own private superstitions, and I'd like to go in just as Boy's going into the ring. He needs luck, and we should time it just about right if we leave now."

THEY went out the front door, and entered a sleek, black limousine that awaited there. The chauffeur drove off, while Mr. Haggin relaxed in the back seat with closed eyes. Danny looked out of the window, eagerly drinking in all the things that were New York by day. He missed nothing from the blue-uniformed policemen at intersections to the newsboys who scooted along the sidewalks. The chauffeur stopped suddenly, and Danny looked ahead to see a uniformed officer directing traffic down a side street. Bright fire trucks were huddled on the street from which they had been shunted, and smoke rolled from the fourth story of a building there. Mr. Haggin muttered to himself and looked at his watch. Finally the car rolled to a stop before the big building-Danny recognized it even by daylightinto which Robert Fraley had taken Red. He gulped, and tried to quiet the frightened little butterflies that were in his stomach. It was a huge building, big as all the buildings in the Wintapi, including Mr. Haggin's barns, and he didn't even know his way into it.

He got out with Mr. Haggin, and the chauffeur drove away down the street while they joined one of the lines of people moving through the doors. From somewhere Danny faintly heard the frenzied barking of a dog that was either excited or in distress. He listened attentively. But it wasn't Red. Close behind Mr. Haggin, he passed down an aisle to take his seat directly before one of two dog rings. Almost as soon as he sat down, he saw Red.

The dog had a short leather leash about his neck and was walking, to the left of Robert Fraley, around the ring. Danny skipped the thirteen dogs whose handlers were also gaiting them for the judge, and fastened his eyes on Red. His finger nails bit deeply into the palms of his hands, and his knuckles whitened. It had happenedexactly what he had feared most. The dog in the ring was not the one that had come wagging up to greet him, the dog of the Wintapi. He was not the Red Danny knew, but only an animated plaything that walked around the ring because he had been taught to do so. Beads of sweat gathered on Danny's brow.

A tiny piece of paper, borne by a gentle wind current, whirled over the ring and settled on the floor of the amphitheatre twenty feet beyond it. Three of the dogs looked at it, but Red did not. Danny tore his eyes away from his idol to look at the other dogs.

He swallowed hard. Never before had he seen so many magnificent dogs—unless he had seen them it would be hard to believe that there were that many. His eyes skipped over two whose feet turned out slightly at the pastern, and whose gait was in a very slight degree erratic as compared to Red and the rest of the setters in the ring.



When writing to Advertisers please mention The Guide

He looked sideways at Mr. Haggin, and tried to keep from looking back into the ring. But he couldn't. His eyes were arrested by the third dog behind

A rich, golden chestnut, with a narrow white blaze down his face, the dog at first glance seemed almost as magnificent as Red. He was big, with a long neck and a lean head. His front legs were very straight and strong, with beautifully symmetrical feathering flowing from them as he walked. His feet were tight, strong, and small, his chest deep with ribs well-spread for lung space. Long loins had a nice tuckup before strong rear legs. His tail, extending slightly downward, waved gently as he walked.

Danny nudged Mr. Haggin and whispered, "Is that third one behind Red Heatherbloom?"

"It is," Mr. Haggin said. "I told you he was magnificent."

"He sure is," Danny breathed.

Another wisp of paper blew across the amphitheatre as the dogs were lined up, head to tail, before the judge. Danny saw the judge confer with the two handlers whose dogs turned out at the pastern, and one of them led his dog around the ring again. Then both withdrew their entries. Danny looked approvingly at the judge. Such a defect wasn't easy to see, but if a show was to determine a dog's perfection then it was right that these two be withdrawn. The judge knelt beside the first dog in the row, and opened its mouth. Danny saw white teeth flash, and thought he saw the lower jaw protruding slightly ahead of the upper. He whispered to Mr. Haggin.

"That dog looks undershot."

Mr. Haggin grinned. "Maybe I should ask you questions. Where'd you learn the A.K.C. rules, Danny?"

"I didn't. But a body knows what's the matter with a dog. Fifteen dollars is a right smart heap of money to spend for a hound if you get one that can't run, or bite, or has no wind. A body's got to look for things in a dog."

The judge ran his hands over the dog's head and ears, on down the neck, and over the chest while the handler knelt at the rear, pulling gently on the tail. The judge moved to the rear, and the handler stepped quickly in front of the dog to grasp its head firmly and extend it.

"He's showing the neck-line," Mr. Haggin explained, "and steadying the dog."

The judge returned to the front, picked the dog up under the chest, and dropped him easily to the floor. Then he moved to the next dog, while the handler knelt before the one that had already been examined and stroked his charge. The judge went on down the line, and Danny watched wildly as he bent over Red. The big dog posed perfectly. His front legs and feet were set perpendicular on the floor, and from the hock down, his rear legs were also perpendicular. His neck stretched up and forward, his head and muzzle were level and parallel with the floor, and his tail sloped gently downward. But there was still something missing,

something that should be there and was not.

THE judge finished the last dog, and at a little trot the first handler ran his dog around the ring. He stopped, and again the judge knelt to examine the dog's jaws. The handler led his dog back to the bench, and one by one the rest of the handlers gaited their

Danny leaned excitedly forward. Heatherbloom, Red, and two dogs that Danny could not identify were up for the final judging. Mr. Haggin had said that Red needed luck. Danny crossed his fingers, but when he looked over his left shoulder to spit, he looked directly into the eyes of a fat and perspiring man behind him. Danny flushed, and swung around to watch while beads of perspiration gathered on his forehead. These four dogs were the best of all that had been entered in the open class. But the best of the four

Danny stared beseechingly at Red, still an animated and beautiful statue under the expert hands of Robert Fraley. Heatherbloom lifted his head to look imperiously at the judge, and sweep the spectators with a commanding eye. Danny sucked in his breath, and once more his fingers bit deeply into the palms of his hands. The dog from England was alive, alert, challenging everyone to dare do anything but give him the blue ribbon. But he was still not so alive and alert as Danny had seen Red. Danny gripped the front of his seat, as though the very intensity of his will and thought would carry to Red the message that Danny wanted him to have. The judge leaned over Red, and passed on to Heatherbloom.

Danny said suddenly, "I'll be back,

He arose and ran along the narrow corridor before the seats while people stared curiously at him and an usher made as to stop him. Danny ran on, unheeding and uncaring. Finally he stopped in an aisle to stand and stare breathlessly back toward the ring. And he saw a miracle.

Red came suddenly alive. Physically he was the dog that Robert Fraley had led into the ring. But there was something about him now that had not been there before. Red was once more the dog of the Wintapi, the glorious dog that Danny had first seen when he went down to report to Mr. Haggin that the outlaw bear had killed another of his bulls. Danny saw the judge smile, and hand the blue winner's ribbon to Robert Fraley.

For a while Danny stood very still, watching the happy dog in the ring strain toward him. Ross had said that a smart hound could hunt anywhere if he kept his nose into the wind. And Ross was right. The pieces of paper, blowing across the amphitheatre, had shown Danny which way the wind was blowing. All he had had to do was go stand in the wind current, and let his scent be carried by it, to prove to the dog that the boy he worshipped most was still standing by.

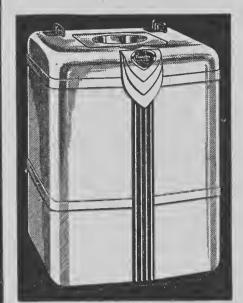
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need Outpost Hospitals and nursing service—their only medical aid. Crippled chil-dren's hospitals must be maintained and expanded. Men, women and children across Canada need the Blood Transfusion Service the Red Cross has started to supply.

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SELECTIVE WEED KILLER

Continued from page 11

2, 4-D far surpasses any other chemical for treatment of weeds in turf.

Likewise 2, 4-D fills a useful place in treating patches of almost any weed growth found around farmsteads, along fences, lanes and walks. The persistency of the weed will determine the concentration or choice of material. Here again the weeds should be treated when in the active growing period before the tissue has hardened. False ragweed which is so general and troublesome, is easily killed until it approaches the seed-setting stage, when it shows considerable resistance. Taller, ranker growths of weeds require more solution in order to wet all foliage.

MAJOR use of 2, 4-D opens up when the problem of weed control in cereal crops in western Canada is considered. The perfect selective herbicide, when used without damage to growing crops of wheat, oats, barley and flax, should kill or greatly check two main groups of weeds: (1) Annuals such as wild mustard, lamb's-quarters, stinkweed, and wild buckwheat; (2) perennials, of which Canada thistle and sow thistle are perhaps the most common.

Limited trials in the use of 2, 4-D on growing crops were reported on and carefully considered at the third annual meeting of the North Central Weed Control Conference held in mid-December, 1946, at Des Moines, Iowa, and attended by 259 delegates from twentyone States and five Provinces. Conference delegates, while admitting some damage can result from the application of 2, 4-D to growing crops, agreed that its effectiveness on weedy crops considerably outweighed possible damage. The Conference went on record in agreeing that 2, 4-D could be used "to reduce the vigor, and begin the eradication of susceptible annual and perennial weeds, either alone or in tolerant growing crops."

In the spring of 1946, near Indian Head and Regina, strips in fields of wheat were treated with 2, 4-D, the trials being under the direction of Dominion Experimental Farm officials. Application was by means of the turbine sprayer, using five gallons of solution per acre. At Indian Head the average increase in yield amounted to 3.3 bushels per acre; at Regina 2.1 bushels. After both field demonstrations and trial plot work in Manitoba with 2, 4-D, the following general observation was made: "Field observations indicated no damage to cereals whereas flax was noticeably affected."

Near Winnipeg a 35-acre field of millet, very heavily polluted with wild

mustard, was sprayed at the rate of 80 gallons per acre with .05 per cent 2, 4-D (slightly less than 10 ounces per acre of acid or equivalent). Almost 100 per cent weed kill was obtained, and a fair crop of millet harvested. Had chemical not been available the owners of this property would have plowed down the crop.

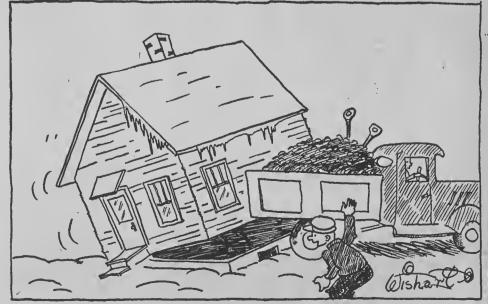
Although another season of trial and experimentation will be required to establish with certainty the correct dosages of 2, 4-D to use under field conditions, the Manitoba Weeds Commission has given a lead for the season 1947, and recommends: For annual weeds in growing tolerant crops, % to % pound of acid per acre; for perennial weeds other than in growing crops, % to 2 pounds; and for woody plants, 2 pounds upward.

It should be noted that the user must ascertain the acid content of the product he purchases in order to determine the amount of product he needs to use. Considerable care should then be taken to calculate the quantity of 2, 4-D product needed to give the required poundage of acid.

A NOTHER quite promising field, although not yet explored, is the place this weed killer may find as an aid to destroying weeds while land is under summerfallow. May it not be possible to reduce cultivation to one or two operations by the application of 2, 4-D to weed growth once, or perhaps twice during the season? In addition to the reduction in labor costs, the lessening of the hazard of soil drifting would be of major importance.

Again, too, is the problem of the common perennial weeds, difficult at best to kill by fallowing, which may respond to treatment with 2, 4-D. On the other hand, two widespread and troublesome weeds, wild oats and quack grass, are immune to the chemical. However, summerfallowing has never been a very satisfactory method of controlling wild oats. If quack grass were present as the major weed, treatment with 2, 4-D would be ruled out. Undoubtedly this possible use of 2, 4-D will receive the attention it deserves during the next summer.

FEW weeds appear to be highly A resistant to 2, 4-D. Four of these come within the group termed deeprooted, persistent perennials - leafy spurge, hoary cress, bladder campion, and Russian knapweed. Once established they are most difficult to eradicate, defying ordinary eradication methods. The first three named weeds have come under fairly extensive testing with 2, 4-D in Manitoba, while Russian knapweed has been treated elsewhere. While good top kills have been obtained, the difficulty is to destroy the deep and extensive root system common to this group of weeds. Those whose job it is to study the manner in which chemicals reach all parts



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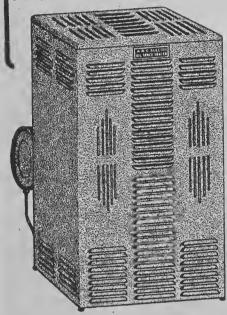
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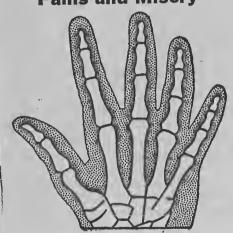
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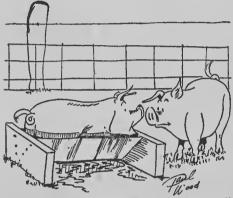
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of a plant, think that the chemical, or the toxic substance it produces in the plant tissue, fails to penetrate to any extent below the crown of weeds that show resistance to 2, 4-D.

Although similar in habit of growth to the weeds just discussed, and one of the most difficult of weeds to eradicate, field bindweed is very susceptible to 2, 4-D. During 1945, a series of plots near Winkler, Manitoba, were treated in mid-July, and another series in mid-September. Examination of these plots a year later showed 50 to 75 per cent of the bindweed killed on the first series, while on the September-treated plots, practically a 100 per cent kill was obtained. Workers elsewhere report findings in keeping with the Manitoba results. More extensive trial plots were treated in 1946 in the Winkler district, with quite encouraging results noted in early fall. The plots will be carefully checked this next summer.

Purslane, the bugbear of gardeners, though an annual, shows a degree of resistance to 2, 4-D. Quite extensive trials with this weed were conducted by



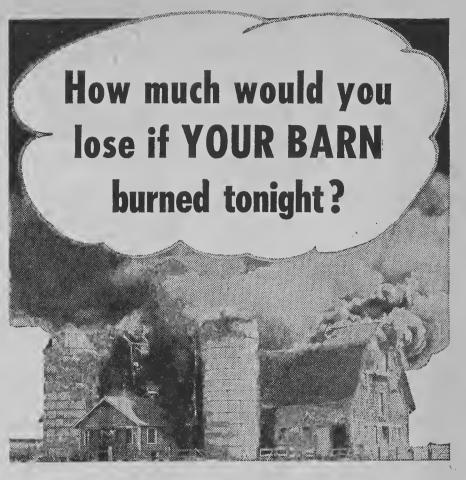
"Just let me relax and you always get hungry."

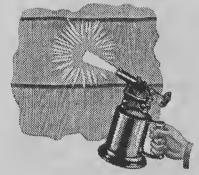
officials at the Morden Experimental Station. Almost 100 per cent kill followed treating when the plants were in the pre-bud stage, by use of the ester formula; less satisfactory results were had with the other formulae or with any material when the plants were in the flowering stage. Poison ivy is another of the less easily destroyed pests that has responded well, especially in the earlier stages of growth, to some 2, 4-D formulae, while less satisfactorily to others. As a number of experimenters have noted, better kills follow treatment where the poison ivy plants are in the sun rather than

AND still another use for 2, 4-D would seem to be in pastures where overgrazing has permitted weeds to get the upper hand. In the Winnipeg milkshed, gumweed is everywhere abundant. In six plots laid down late in the season of 1945, only three gumweed plants survived in one of the six plots 11 months later. A quite extensive series of plots were treated in 1946, with similar results. Cockle burr likewise proved very susceptible to all formulae as did hedge bindweed, or common morning glory, and false ragweed. The woody-like snowberry, on the other hand, proved resistant to all concentrations and formulae.

In appraising properly this newest of herbicides, much more experimental work is needed. Again, chemists are not satisfied that 2, 4-D as we have it, is the final product. Rather, they consider it the forerunner of perhaps a number of more potent and more highly selective products that will follow. Perhaps too, users of 2, 4-D expect too much when they look for 100 per cent kills to follow a single application that is often none too well applied.

[Note: H. E. Wood is an official of the Manitoba Department of Agriculture and Secretary of the Manitoba Weeds Commission. As such, he is responsible for a recent bulletin "Chemical Weed Control," that is available to residents of Manitoba on application to the Manitoba Weeds Commission, Legislative Building, Winnipeg.]





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HARNESSING THE WIND

Continued from page 10

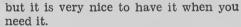
it, and the machine will soon come to rest. With automatic control sets one does not have to take these precautions.

Since most farmers will decide on a 32-volt plant, the next question is, "How big should a 32-volt plant be?" Without going into detail, a 500-watt plant is small, an 850 is medium and a 1,000 or 1,200-watt plant is large.

The engineering department at the University of Saskatchewan has made quite a study of farm lighting plants, and for the average or family size farm, they recommend an 850 wind-electric plant, costing, with a forty-foot tower,

around \$300 and a 600-watt gas driven unit costing from \$200 to \$250, and they allow another \$100 for wiring.

They can prove that it is better to buy a slightly smaller and less costly wind electric and install a small gas plant at the same time. In that way, you can reduce the size of the batteries and their cost, use the cheap wind power when the wind blows, and have the engine on hand to use if the wind fails. You may find that you'll use the engine very little,



One of the important things about a wind-electric set is to get the outfit up high enough so that it can catch the full force of the wind. The propeller should be fifteen feet above the tops of any buildings or tops of any trees that are within 800 feet of it. The steel towers cost about a dollar a foot, and an extra ten to twenty feet on the tower may give a great deal more power to the generator.

A NOTHER important thing is to use heavy enough wire, especially if it goes any distance. For a 1,000-watt lighting plant, the Saskatchewan University recommends nothing lighter than No. 8 lead-in wire up to thirty feet, No. 6 for one hundred feet and No. 4 if the distance is up to three hundred feet. That is, if two houses, or the house and the barn are one hundred yards apart, it will take two wires of No. 4 gauge to connect them. If you use smaller wire, you just won't get the power or light out of the other end that you should.

What can you do with electric power? You'd be surprised! First of all, you can have lights and good ones. You can have them in every room of the house, up in the attic and down in the basement. You can have them down in the barn, in the chicken house and the blacksmith shop. We have also found it very useful to have a bulb outside the porch door, too.

Wherever your lights are, they can be bright, steady and silent, they give no odor, take no cleaning or filling. If properly installed, they are also very safe. I am very fond of the use of wall switches, even in out-buildings. It is very nice to be able to open a door and put your hand right on the switch. Snap, and there you have your light.

Next comes the size of bulbs to use.

You will find that any size bulb has the same sized base in ordinary fittings to fit any socket. A 100-watt bulb gives a nice strong light, and if not shaded too much, will provide a good light for a good-sized living room. The next smaller sizes, 50's and 60's, give a nice bright light for a slightly smaller room like the kitchen. The color and finish of the walls of the room have some effect too, the brighter colors reflecting more light.

A 25-watt bulb makes a nice light at the head of the bed, and even a 15-watt is strong enough for small rooms, closets and basements. You can unscrew them and change them around just as easily as changing the screw top of a fruit jar. Of course, a 100-watt bulb draws as much current as two 50-watt or four 25watt bulbs, and so on. But in any case, use big enough bulbs, and place them where they will do the most good.

Next to the lights, most farm women want an electric washing machine.

These are much superior to the gas powered models, as they start at the touch of a switch, run more quietly, don't smell or smoke, and also cost less. They don't take a great deal of power either — about 280 watts, or slightly than three 100 - watt burning at the same time. There are very few electric washers on the market, and even less of the 32-volt size. Remember that a 110-volt motor just won't run off a 32volt plant.

If you can't buy a washer, perhaps

you can locate an electric iron. I was able to buy one last spring, and we have found it a great comfort.

Now don't hold up your hands in holy horror and say, "But an iron takes too much current!" for I know better. It does draw around 550 watts, but that is only as much as five 100 watt bulbs and a 50-watt bulb going at once. If you have a good set of batteries, an iron won't bother them much, but if you have the charger running, the iron will get just that much hotter. Unless you are doing heavy work, you may even have to pull the plug at times to let it cool off a little.

Look at it this way. All summer you don't use many lights, and with a windelectric there is nearly always a surplus of current. It is on the hot summer days that you appreciate a cool kitchen most. Think of being able to do a whole ironing without the use of the cook

WOULD call a toaster a luxury, but it doesn't take as much current as an iron, nor will it run as long. It would make a mighty nice Christmas gift for mother, and the rest of the family might enjoy the toast too. Toasters and irons don't cost a great deal, and we hope that they will soon be on the market again. But, remember, all these appliances must be for 32 and not 110 volts.

An electric radio draws around 150 watts, or the same as one big bulb and a smaller one. An electric refrigerator only draws the same amount of current while the compressor is running, but here is the hitch. The compressor may run as much as ten hours a day or seventy hours a week. If it did, that would take as much power as the lights for all the house, the barn and the yard too, so a kerosene refrigerator or even a good ice box might prove to be the



On the author's own farm at West Plains, Sask.

After you have lights and power, the very next thing you'll want is running water. First of all, that calls for a good well not too far away, and a pressure tank and pump, motor and pipes. Even without the pipe and fittings, the tank, pump and motor will cost just over \$200. But still, hot and cold running water under pressure would be mighty nice.

It, too, can be powered by the same wind-electric plant. These pressure systems are automatic in operation. After they are set up, we turn a tap and out gushes the water at twenty pounds pressure to the square inch. After you draw off about seven gallons of water, click, and the electric motor starts to pump water into the tank again until the pressure goes up to forty pounds. Then click, and the motor stops, all without any attention.

THE pump I have in mind can raise water from a deep well, even at a distance from the tank, and still have all the working parts of the pump right in your basement. There is only one moving part to these pumps, so they can be expected to run for months at a time with almost no attention.

When the motor is running, it takes about as much current as three big bulbs, but it only runs a very few minutes at a time. If you have sufficient water there is no reason why you can't water the garden too. All summer you will likely have current to spare, so why not let the wind-electric pump water for you when you need it?

These pressure systems can be used both in the home and in the barn, as well as to wash the family car, water the garden and even afford a measure of fire protection. And the power all comes from the wind.

I have tried to show some of the benefits and most of the costs of these farm electric plants. It is up to each

Distributors

person to decide if he can afford one or not. A married couple without children on a grain farm could get along very nicely with a real small outfit. But it is on the family size farms and ranches where they are most useful. Some farms have more than one family on them, like our own, where my brother and I both use the same outfit.

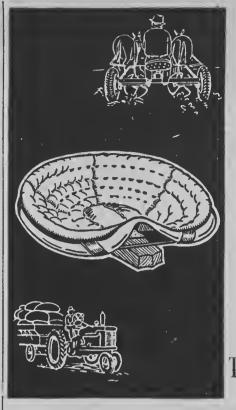
With the last few years of good prices, many farmers and ranchers have been able to lay a little money aside. The question may be, "Shall we move off the farm to the comforts and conveniences of city life, or shall we bring some of those same comforts back to the farm for us?"

A lighting plant is a mighty sound investment, and will in most cases increase the value of the farm more than the cost of the plant. But the greatest value will be in the day to day comfort and lightening of the labor both in the home and around the farm yard. So why not get a wind-electric, and instead of cussing the wind, as I have heard some farmers do, let it work for you? Once installed, a good plant will run at very little cost, so turn on those lights, plug in the iron, sprinkle the lawn, and let the wind work for us instead of against us for a change.

Pre-fabricated Age

When the 10,000th aluminum house was set up in Brighton, England, a civic ceremony was arranged to commemorate the occasion. A neat lawn was laid out, complete with ornamental shrubs, and the lucky tenants congratulated by the mayor with batteries of press phos tographers in attendance. To the tenant's dismay, an hour after the ceremony city workmen came and took away lawn and bushes.

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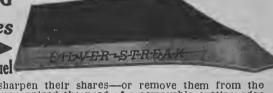
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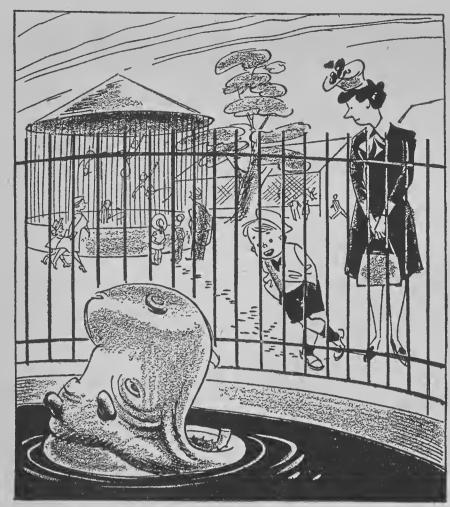
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"They'd have to cut an acre of wheat and malted barley to get enough of those golden grains for a couple of mouthfuls of Post's Grape-Nuts Flakes.

"And they'd have to pack 'em loose in box cars instead of those big economy size packages."

"Come, come, Wilbur. You're making me hungry. Let's go home."



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Rammed Earth Houses

Some engineers unwilling to give their final blessing to this form of construction

THE Country Guide issue of November, 1946, carried an article on rammed earth houses written by a Regina contributor who had gathered his inspiration, of which there was much, and his information, of which there was little, in his own province. This article brought in a volume of correspondence exceeding our wildest expectations, proving that there is considerable interest in the country in cheap building construction. After all, this is not remarkable since all over the prairies many families have spent years of frugal pioneering in houses built of material from the nearest slough. In spite of the shivers that



June at Saanichton, B.C.

tingle the spines of health officials, and the esthetic horrors of professional architects, many husky and intelligent Canadians got their start in life in dwellings which never went through the blueprint stage.

In dealing with the multitude of questions raised by the correspondence, The Guide has had to rely on the professional engineers who have studied earth house construction. Unfortunately the record is a little sketchy, and not much new knowledge has been added of late years. At the conclusion of the first war a number of American agricultural colleges published bulletins on the subject, but enquiries show that these are now out of print. Presumably money is now so plentiful in postwar Yankee land that they are more concerned about automatic stokers and air conditioning.

OUR only recourse in the end was to direct all the correspondence to Saskatchewan University, whose engineering department was probably seriously embarrassed by the volume of work dumped on their small staff. And while their engineers had a small number of copies of an old bulletin on the subject, there was not sufficient printed material to answer all demands. They have, however, stepped into the breach by producing some multigraphed material which we understand is now being distributed to enquirers.

The provincial department of Reconstruction and Rehabilitation at Regina has also been helpful. It has found funds for the construction of at least one experimental rammed earth house which it is expected will be built this summer probably at Saskatoon.

As so many Guide readers have had to wait for a reply for so long the editors feel that this full explanation is due them. The only other word to be added is that The Guide is neither for nor against the principle of rammed earth construction. We are merely purveyors of information, giving the widest possible circulation to practical conclusions arising out of the experience of farmers and professional men. If the weight of evidence is in favor of other building materials The Guide will say so with as much freedom as it published the first article which started this flurry of interest.





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The Countrywoman

Melting Snow By EFFIE BUTLER

Into the earth seeps the snow, Into ash falls the ember; Beauty is a fleeting thing To cherish and remember.

I Would Come Back By GILEAN DOUGLAS

Life has not been kind to me. I have suffered want and cold, I have lost, I have bled, I have left my best unsaid; I am growing greyly old In a harsh futility.

But I would come back once more, Live again each crippled day Just to smell forest loam, Just to watch a lark fly home; I would walk a rougher way To hear a sea wind on a shore.

There is a Man on the Cross

By ELIZABETH CHENEY

Whenever there is silence around me By day or by night-I am startled by a cry. It came down from the cross-The first time I heard it, I went out and searched-And found a man in the throes of crucifixion, And I said, "I will take you down," And I tried to take the nails out of His feet. But He said, "Let them be, For I cannot be taken down Until every man, every woman and every child Come together to take Me down." And I said, "But I cannot hear you cry. What can I do?" And He said, "Go about the world-Tell every one you meet-There is a Man on the cross."

Homemakers' Course

SHORT course for homemakers is being A offered again this year by the University of Manitoba. This is the fourth year that such a course has been offered but the program is sufficiently different from those of previous years to make it worthwhile for former class members to attend.

The date has been set for May 5 to 11, 1947. The course will be given at the University. Fort Garry site. Rooms and meals at reasonable rates will be available to those who wish to live in residence or to take their meals there. It will provide a week of new interest and holiday for many women and girls. The course will consist of lectures, demonstrations and visits to institutions relating to such subjects as: Designing, making and caring for clothes, modern furnishings and new equipment, textiles, economy in buying and how home economics can serve you in the community. The tuition fee is \$2.50. Make applieation for the course to Dean J. W. MacEwan, University of Manitoba, Winnipeg, Arrangements for rooms can be made by writing Miss Wilda Irwin, Dean of Women's

"NO your work-not just your work and no more, but a little more for the lavishing's sake: that little more which is worth all the rest. And if you suffer as you must, and if you doubt as you must, do your work. Put your heart into it and the sky will clear. Then out of your very doubt and suffering will be born the supreme joy of life."-DEAN BRIGGS. Now is the time to make plans and to start at the improvement of the farmhouse and grounds By AMY J. ROE

ITH the approach of spring, there comes an urge to get started at a clean-up of the house and grounds. The bright sunshiny days of March reveal the clutter which has possibly accumulated during the winter, which has been mercifully hidden from view by the snow. We long to make a clearance. Dust and smoky grime darken walls inside the house. We feel, suddenly, that a cleaning campaign is overdue. In thinking of tidying-up our minds just naturally turn to changes and improvements we would like to make in the place in order to bring more neatness, comfort and beauty to our home surroundings.

Recently I visited a young couple living on a Manitoba farm. They had taken over a farm where the buildings were already built, the space for grounds was already decided for them. They were not satisfied with the setting so had had a plan drawn up for the improvement and beautification of the place. The man was a graduate in agriculture, the woman a graduate in home economics so they had had good training in analyzing a problem and appreciated the importance of working to a given plan'so that each piece of work attempted and done would fit in to the picture of what they some day hoped to achieve. They had secured the best possible advice from agricultural advisors as to kinds of shrubs, varieties of fruit, grass and planting of lawns.

The young wife brought out the sketched plan. There on a large sheet of cardboard was drawn a scaled plan of their garden and houseyard. Here in this spot had gone the raspberry bushes, which were already bearing fruit, here were some flowering shrubs. There, as sketched in, were to go this year's flower beds and borders with due consideration being given to season and length of bloom. Next year, and the next, certain other items would be added. It was a fascinating study for us both. If you do not already know what interest and fun there is to be found in making landscape and ground plans on paper, then you had better start right now to make one of

your own to suit your particular needs.

There is an aid to such a project in Bulletin No. 9 entitled Farmstead Planning, issued by the Alberta Department of Agriculture in 1946. The author, E. C. Hallman says in the introduction: "In many of our country homes may be found the most wholesome forms of domestic life yet attained. Almost everywhere we look we see fresh evidence of the desire for beautiful surroundings that is now sweeping the country. Home improvement is a venture in self-expression. Is it not true that we are judged largely by what is seen approaching our homes? Are you satisfied with the appraisal of your character that your home surroundings depict?

"As a rule, establishing a home on the land is undertaken but once in a lifetime. Few have had previous experience in so important an undertaking. Many are deterred because they do not feel competent alone in planting where their mistakes may

continue for generations to come.

"There are certain far-reaching advantages in making one's own plans. The owner knows best, all the special conditions and circumstances of his farm and business. He realizes also the personal preferences of the family unit. He can better visualize how his place will look when completed, and will take a more enthusiastic and prideful interest in working out a plan of his own making."

Another good aid to landscaping the farm grounds is to be found in a bulletin entitled Ornamental Shrubs and Small Trees for The Canadian Prairies, written by S. W. Edgecomb, Ph. D., formerly Associate Professor of Horticulture, University of Manitoba, published in 1944 by Line Elevator Farm Service. Copies of this bulletin (No. 4) are available through the Winnipeg or Calgary offices. The author has drawn freely upon information in the publications of Dr. J. S. Shoemaker, University of Alberta; the Dominion Experimental stations in the prairie provinces, especially the Morden Station; files of The Country Guide; and nursery catalogs. The booklet is nicely illustrated and gives the reader a clear idea of what may be expected in form and color from the various types of shrubs and small trees.

Painting of the buildings is another feature of improvement that does not need to be delayed because of shortage of materials. A fresh coat of paint on the house, barn and outbuildings will do wonders to give the place a well-kept air.

The business of planning and improving the farmstead is one phase of home improvement that does not need to wait because of scarcity and high cost of materials. Whether you are starting brand-new on a farm that has not yet any buildings you intend to use or if you wish to make the best of what already is established, good farmstead planning and improvement is a firm foundation for future home planning.

Farmhouse Special Needs

WE have made the claim repeatedly on this page during the past several years, that there is a great lack in Canada of architects competent in designing farmhouses. As a matter of fact there is a lack of architects for designing all types of buildings today in this country. Of those who are available, few have either the experience, interest or financial inducement to turn their attention to farmhouse plans. But they must be found, given the necessary training and put to work on the problem.

Recently among a group of friends discussing farmhouse plans and how they should differ from those intended for town or city dwellers, an architect queried the point. A few of those present attempted to set down the main points which should be kept in mind when thinking of building a house for the farm family. They were briefly:

1. The house will likely accommodate a larger family than is usual in a city.

2. The topographical area should be kept in mind, and the direction of the prevailing winds.

3. The house must be oriented to farm operations. The occupants will probably insist on kitchen windows overlooking the farmyard so that it is possible, during the hours of kitchen work, to keep an eye on men coming from and going to fields or barns.

4. The farmhouse must provide some sort of space for office business such as keeping records, telephone,

5. There is the problem of feeding extra help and an area where men can discard heavy out-door clothes and wash-up before going to the meal table. It should be planned that they do not have to cross areas where the housewife is busy with last-minute meal preparations.

6. A rear hall and stairway is a desirable feature, saving many steps and traffic across other rooms.

7. Most of the traffic comes into the house from the rear of the house. The placing of the front door may differ from that of the town or city house.

8. The farmhouse has to give greater storage space in basement for vegetables and fruit, kept in large quantities. Storage of water supply is important and must be provided for.

9. Sewage disposal, water drainage and plumbing and heating systems, and electricity are matters of special planning and provision.

10. The kitchen is in a sense a small factory on the farm, where food is prepared in large quantities for use and storage.

11. The utility room, apart and yet adjacent to the kitchen is a necessity in good modern planning of farmhouses. It replaces the old summer kitchen which filled a need.

12. The living-room should be large as it often accommodates small social gatherings as well as filling family needs.

The Country Guide has had many letters from farm people telling what they consider most important in designing new houses or remodelling old ones. We quote again for emphasis a statement of H. E. Wichers, architect member of the staff of Kansas State College, author of many farmhouse plans and lecturer of some note: "Few people seem to realize the complexity of the average farmhouse problem and often ignore important elements. The desire for efficient farmhouses is the motive power that will bring us good farmhouses; but as always, in order to give definite expression to those desires we must remember that the farmhouse is built to house the family and to provide for its activities. Slowly but surely, certain facts about the farmhouse will be accepted as basic, and eventually the whole structure will be planned to agree with those facts. Already certain of these basic elements can be described and as more become known, the farmhouse style will become clear and definite."

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with the first breath!



Nothing Better

OF ITS For Children

In England Now

An answer attempted to the question: "Is rationing leading us to dishonesty, bad manners and inhospitality?"

By JOAN M. FAWCETT

and Queen and the Princesses left London today for Portsmouth to embark on the Vanguard for their journey to South Africa. We are all very conscious of their going even if we live nowhere near London. We have listened on the wireless to their departure from Waterloo station and their arrival at Portsmouth. Even quite small children have been excited by it. And now we remember them all the time in our conversation. We are deep in the coldest weather that England has known for many years and so we keep hoping that it won't be long before our Royal family will be experiencing something a good deal pleasanter. Every evening we hear in our news how things are going with the Vanguard.

Saturday, February 1, 1947. A question was put to the Brain Trust on the wireless the other night, that is, I think, of very great interest and concern to us all here. The question was: "Is continued rationing leading us to dishonesty, bad manners and inhospitality?" At first one is tempted to cry, "Oh! no, surely we are bigger minded than that." But when one begins to examine one's life with those points in view, it makes you raise your eyebrows and pause. We have come a long way in these last seven years from the good spacious days of peace and plenty.

Since I heard that question, as I knitted by the fire, I have been thinking a good deal. I can of course only review it from the point of view of the very average citizen who knows very little about finance or the deeper workings of the black market. I have taken the question in its three parts.

First—this is the part of the question which I think is the most important and the most likely to leave a lasting effect on people's characters-is rationing causing dishonesty?

I believe it is. It is only petty dishonesty in most cases but nevertheless it is dishonesty. I am not now thinking of the seriously dishonest people who must have their food and comfort at whatever cost and who deal in the black market. Those people would be dishonest about something anyway.

I am thinking about the ordinary person—the young married couple, the housewife with a family, the typist, the farmer—are they being driven because of rationing to do dishonest things that they would never have otherwise done? Of course it is awfully easy to think that one set of these petty dishonesties -the set one practices oneself-is excusable and the other sets are not. For instance, I do not hesitate if there are eating apples in the shops to go to as many shops as I have time for and get the maximum quantity—say two pounds from each. Apples are not rationed and the children love them and they are good for them but I know all the same that the original two pounds was supposed to be my share. But on the other hand I should never dream of buying a clothing coupon or of paying more for my clothes so that the shop could buy coupons for me, as many people do. I buy eggs off the ration when I can find somebody who will sell them to me but I never pay more than the controlled price-3/6 a dozen-for them. If I am asked a silly price like 7/- we do without because that is black market! I have never bought coal from a miner or asked anyone to smuggle silk stockings through the customs for me but on the other hand I never hesitate to bring away any surplus sugar from a restaurant after I

Friday, January 31, 1947. The King have had a cup of coffee. You would laugh if you saw respectable elderly women surreptitiously pocketing little envelopes full of sugar. We might be small children who have been refused an extra sweet. But we tell ourselves that after all the restaurant is allowed so much sugar per cup of tea or coffee served and that if we do not take any that is left the waitress will. And then, of course, under this question comes the under-the-counter racket. This isn't strictly dishonest because you do not get anything without paying for it in money and coupons but if you have a friend in a shop who will save things for you the moment they come in, you do get a terrific pull over your les fortunate neighbors. In this respect th less well off people often score over the wealthy, for they are more likely to have relations and friends in shops. There is nothing like having a grocer for an uncle these days.

Well, so much for dishonesty. The answer is definitely yes, I think, but it is more difficult to say how lasting this dishonesty will be. Let us hope we shall shed it like a worn out skin when day of plenty are here again.

The second part of the question concerned manners. This is most serious as it is affecting the children. No child under ten can remember or even realize what it was to have unlimited sweets, butter, jam and fruit. They have no idea what it is like to have a box of sweets in the house for anyone to dip into. It is now a question of, "Is that your ration?" or "Can I have my ration?" No grownup now takes a sweet from a child and in consequence very few children remember to offer them round. It seems rather pointless, I expect, if no one ever takes one. On the other hand many grownups give all their ration to the children and the children know this. They know too that all bananas are theirs by right as there is no allocation of bananas to anyone over eighteen. Butter and sugar are usually weighed out into individual pot at the beginning of each week and so when it comes to a meal time there is no need to pass them to each other.

What is more distressing, you have the discourage their natural generosity. Our small son of five and a half has just started going to school. He takes biscuits with him for the eleven o'clock break and also sometimes a small tox in his pocket. After he had been going for a few days we found that he was giving both the biscuits and the to away. In ordinary times it would no have mattered, the toy would probabl have only cost a few pennies and h could have taken enough biscuits fo himself and his friend. But now the biscuits are valuable food and take eight points for a pound besides being in short supply and the toy has probably cost a faithful granny many lonhours of shopping and quite a few shillings.

Another thing that leads to ba manners among adults, I think, is the queueing habit. If a man or a younge woman gives up the place they have won with such patience in the fist queue or the bus they will never ge finished.

Then about inhospitality—I think here we can definitely say that rationing is not leading us to this shortcoming. There is a lot less entertaining of the duller kind, such as asking people you really do not care about to dinne because they asked you last week. Ther just isn't the food for that kind

Turn to page 92

Be Safe At Home

Look about your home for possible hazards and dangerous practices and eliminate them today

By MARION R. McKEE



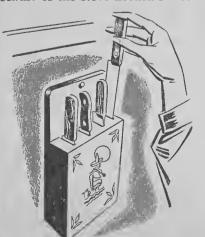
Keep stairways clear.

AFE at home" is a common expression, and one that brings a feeling of warmth and security. "Safe" however may be a carelessly used word. Many serious nd unnecessary accidents occur every ear within the home. The very old and very young are the most frequent asualties, though no age is spared. It s alarming to learn that the home eads all other places as the scene of atal accidents.

To make your home safe look about, ind and immediately fix anything which could possibly lead to an accilent. Care should be taken in everything that is done, and a watchful eye kept towards safety in every way. We can learn from the experiences of others where and why accidents occur, and see that the house has none of these pitfalls. Take time to do things properly; as hurrying often leads to langerous practices.

Records show that the majority of nome accidents occur in the kitchen. The kitchen is a place of great activity and the housewife spends much of her ime there. It should be kept in order or safety's sake. A great many accients in the kitchen come from falls. There is something on the top shelf of he cupboard the housewife desires, nd in an effort to save time she brings ip a wobbly chair and stands on it. A fall may result which would not only vaste more time but cause a great deal f pain and perhaps expense. Chairs, tools, and boxes should never be used reach hard-to-get-at places. The rovision of a short stepladder with firm base is a safety measure. Falls ay result from spots of water or ease on the floor. Wipe these up imediately when they are noticed. By uick action a nasty fall may be verted. Slippery peelings from fruit nd vegetables should also be picked p from the floor the minute they are

Because of the stove needed for cook-



A wall rack protects cutlery.

ing in the kitchen there is always the danger of burns. Caution should be used. When lifting the lid of a pot or pan which has been cooking food or boiling on the stove, always use the lid as a shield against splashing grease and steam. Hot grease or steam makes painful burns. Potholders should be of adequate size and kept in the best of condition. Worn places or spots where the stuffing is thin will allow the heat to penetrate through to the hand and may cause you to drop the whole pan of hot food on yourself. Potholders that completely cover the hand like a mit are the best and safest to

Pot handles should be kept pointing to the back of the stove, or if set on a table should point away from the edge. A pot handle protruding over the stove or table is easily brushed against and the scalding contents spilled. Small children prodded by curiosity to grab the handle, may be seriously scalded. When opening the door of the oven to look at its contents it is wise to stand to one side to avoid the danger of scalding yourself in the escaping

After doing the laundry in the kitchen wipe the soapy water from the floor. This prevents slipping. Leaving a pail

or pan of scalding water on the floor is a dangerous practice, for a child may fall into it, or an adult may trip over it. For dipping boiling water from the boiler into the wash tubs, use a medium sized pail or a dipper with a firm handle. Do not attempt to carry a large pan of hot or boiling water.

The use of kerosene in lighting coal and wood stoves is dangerous. This practice has led to many fires and the loss of both life and property. A good supply of dry wood chips and kindling should be kept handy

wood or coal stove should not be permitted to become overheated. To be safe there should be a four-inch clearance under the stove to allow for the circulation of air. A metal sheet placed on the floor beneath the stove is a wise precaution. Twelve inches should be allowed between the stove and nearest wall or partition, with an asbestos shield added for safety.

Gasoline and kerosene stoves should be lighted with the greatest care. A serious explosion may result from the accumulation of the fumes if there is a short period of time between the turning on of the fuel and the lighting. Have plenty of ventilation when lighting one of these stoves. Open the door of the burner compartment and the kitchen door as a safety measure. Always stand to one side of the burner when lighting it. When the stove is not in use check to see that the fuel is turned off.

Dry cleaning is often done in the home kitchen, and care should be taken that the use of inflammable fluids is avoided. Naphtha, gasoline or benzine is easily ignited and have been the

cause of many serious fires. An explosion could be caused by an open flame from a match, stove burner, or a spark, or even the static electricity produced by the friction of rubbing

the clothes together. Use a good non-inflammable fluid such as carbon tetrachloride for home dry cleaning.

Sharp knives and other kitchen cutlery are a great help to the housewife. Be cautious in using them, as fingers have a habit of getting in the way and being cut. A wall knife rack for the exclusive use of cutlery is a wise investment, as it keeps everything in its place. Leaving sharp instru-

ments lying loose in a drawer is the cause of many a nasty cut.

KNIFE should not be used to open A cans. It not only dulls the knife, but the knife may slip and cut a finger or hand. The most satisfactory and safe can opener to use is one which does not bring the fingers in contact with the cut edges of the can, and one which

leaves a clean edge. These are inexpensive and may be bought at a hardware store. After the contents have been emptied push the lid down into the can. This eliminates the danger of cutting the fingers on the lid when the can is being disposed of.

Use saucepan lid as a shield.

When a glass or dish is broken, wrap the pieces in a discarded box or can with a cover, and cover it with heavy wrapping paper before throwing it in the garbage. This may consume some time, but will prevent the person who empties the garbage from get-

and safer to use absorbent cotton or tissue to pick up small pieces of broken glass.

Poisons such as paris green, strychnine, and rat poison should always be locked away where children cannot find them. A safe practice is never to leave small children alone in the kitchen. If the child is still a toddler, keep him in a play pen in the kitchen where he will be kept away from danger. If an older child wishes to play with cutouts, let him only use scissors with blunt ends. Avoid giving a child any sharp instruments to play with.

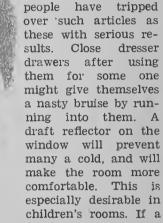
The living-room is a comparatively safe place in the home. However there is still the odd hazard that presents itself, and must be watched. Scatter rugs are a great cause of falls, and they should be fixed so they will not slip. Sewing jar rubber rings on the bottom of these rugs will prevent them from skidding. Synthetic rubber mats may be bought to be placed under rugs for this same purpose. The edges of the rug should not be allowed to curl, as this may trip someone. Tack the edges down with carpet tacks, or else

try to steam or press it flat with a wet cloth.

Slippery wax floors are also a danger point. Use a minimum of wax and rub it thoroughly in. Never leave litter such as children's toys, workbaskets, brooms, mops and such to be tripped on. Keep all main passage ways in the house clear of such objects.

In the bedroom safety should be observed. Keep the space between the door and bed free of shoes, clothing,

chairs, and other things. Many elderly people have tripped



gas or kerosene heater is used in the bedroom, be sure to have plenty of ventilation. These heaters use oxygen rapidly, and may cause asphyxiation. Lamps used in the bedroom or any room in the house should have a solid base so that they will not upset easily. Be sure to check the working condition of the lamp to see that it is giving its best performance. Any lamp shades used should be of a non-combustible

Clothes closets should be kept free of litter and boxes. Shelves piled high with an accumulation of articles are unsafe as objects may fall on the head of a person looking through the clothes. Never take an uncovered lamp with an open flame in the closet to look around, as the clothes may catch on fire. Storing oily rags in closets or in a closed space may lead to a fire caused by spontaneous combustion.

When putting baby to bed, be sure to use light, warm blankets pinned securely away from the child's face. Avoid placing a blanket on the side of the crib to keep out drafts. It may fall or be pulled down and smother him. When selecting toys for a child, only buy large smooth ones, without any buttons or parts which will come off. Babies love to put everything they can find into their mouths. Stuffed toys should be made of material easily laundered and so always remain sanitary.

Bathrooms also have their danger points. Many a person has skidded on the bathtub bottom and broken a limb. A non-skid mat in the bottom of the tub would be a wise precaution. A firm rail on the wall nearest to the tub would also lessen accidents. Soap should be kept in a container which will not let it slip out into the water. This not only eliminates the possibility of slipping on the bar, b [Turn to page 91 save soap.



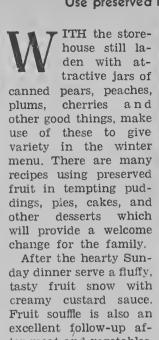
Scatter rugs may cause falls.



to light the fire. A Use a firm ladder for reaching shelves. ting a cut. It is easier

Fruit Favorites

Use preserved fruit to bring variety into cold weather meals



ter meat and vegetables. A filling fruit batter pudding is just the thing to finish a light soup or salad first course. Peach cake will also help to fill the extra corners when the

first part of the meal is light. Fruit pies and tarts are perennial favorites and always receive an enthusiastic response.

Sometimes the fruit in the jar is used, and a large portion of the sweet liquid remains. Save this extra syrup and when you have around two cups or so, make a delicious real fruit jelly with the use of ordinary gelatin. The true fruit flavor is present, and the syrup is sweet enough to require no extra sugar.

Peach Cake (Illustrated)

2 c. nour. sifted 1 T. sugar 4 T. baking powder ½ tsp. salt 2 T. shortening 1 egg, well beaten

% c. milk 8 to 12 canned peach halves
1 tsp. cinnamon
1/4 c. molasses

Sift the flour, sugar, baking powder and salt together. With a pastry blender or two knives cut the shortening into the flour until it is thoroughly blended. Mix together the egg and milk; add to the dry ingredients, stirring only enough to hold together. Turn the dough onto a floured board and roll into a rectangular shape about 1/4-inch thick. Place in a well greased baking dish. Place the fruit cut side up on the cake dough. Add the cinnamon to the molasses and pour over the top of the cake. Bake in a moderate oven (350 degrees Fahr.) about 35 minutes. Serves six to eight.

Fruit Batter Pudding

2 c. canned fruit 1½ c. flour ½ tsp. salt ½ c. milk 1 egg ¼ c. shortening 1½ c. flour 3 tsp. baking powder ½ c. sugar

Sift the flour with the baking powder. Cream the shortening and add the sugar, salt and egg, well beaten. Then add the milk and flour alternately. Place the fruit in the bottom of a greased baking dish and pour the batter over it. Bake in a moderate oven (375-400 degrees Fahr.) for about 30 minutes. Any canned fruit that is not too juicy may be used.

Fruit Snow

34 c. canned fruit pulp Sugar Lemon Juice 3 egg whites

Press fruit through a sieve. Add sugar and lemon juice to taste and fold into stiffly beaten egg whites very gradually. Chill and serve with custard sauce or cream.

Scalloped Peaches

1 tsp. butter or other fat
1 c. oanned peaches
4 c. apples, sliced
½ tsp. salt ½ c. brown sugar½ c. breadcrumbs or cakecrumbs½ c. water



Delicious peach cake is an ideal winter dessert.

Grease a baking dish with the fat. Slice the peaches and put half of them in the bottom of the dish. Pare and quarter the apples and lay half of them over the peaches. Sprinkle with salt, add the other half of the peaches, and then the apples, and sprinkle again with salt. Scatter the sugar over the top, then the crumbs, then pour the water over all. Cover the dish and bake in a slow oven (250-350 degrees Fahr.) from 45 to 60 minutes, removing the cover after thirty minutes. Serve hot or cold, with or without cream. Other canned fruit may be used in this recipe.

Peach Tarts

Make pastry shells of plain or puff pastry, with the inner part a little larger than half of a peach. When these have been baked, place half of a canned peach in the centre of each. Inside the pit cavity of the peach place a few chopped nuts or blanched almonds. Meringue may be placed on top if desired.

Steamed Fruit Puffs

Canned plums
2 c. sifted pastry
flour
3 tsp. baking powder
Pinch of salt 3 T. butter ½ c. sugar 1 egg ¾ c. milk

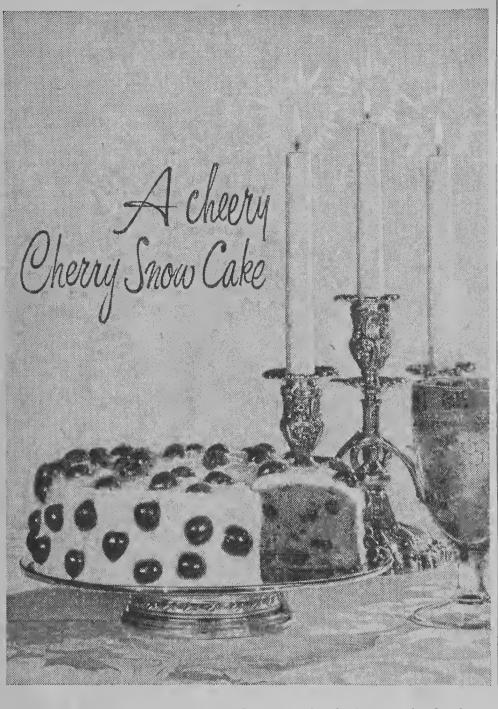
Butter individual molds and place in each three plums and enough juice to cover the fruit. Measure the sifted flour and sift again with the bakin powder and salt. Cream the butter add the sugar gradually and continu creaming. Add the beaten egg and combine thoroughly. Add the sifted dry ingredients and the milk alternately, and when thoroughly combined pour this batter over the fruit in the molds. Steam or bake in a moderate oven (350 degrees Fahr.) for about twenty-five minutes. Serve hot with cream or hard sauce. Other desired fruits may be substituted for plums in this recipe.

Cherry Sponge

1½ T. gelatine ½ c. cold water 1 T. lemon juice Whites of 2 eggs

1½ c. canned cherries
1 c. canned cherry
juice
½ c. sugar

Soak gelatin in cold water five minutes and dissolve in hot cherry juice. Add cherries, stoned and cut in halves, sugar and lemon juice. When mixture begins to set add whites of eggs, beaten until stiff. Turn into mold, first dipped in cold water, and chill Garnish with meringue sweetened and flavored with vanilla. Top with



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• Here's one for the party recipe book-Magic's Cherry Snow Cake! Topped with satiny frosting, studded with plump cherries—bursting with juicy raisins, spicy citron—it's a vision of delight and m-m so delicious!

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CHERRY SNOW CAKE

½ cup shortening 1 cup sugar

2 eggs

2 cups sifted flour

2 teaspoons Magic Baking Powder

¼ teaspoon Magic Baking Soda 3/4 teaspoon salt ½ teaspoon cloves

1 teaspoon cinnamon 1 cup strained thick applesauce

2/3 cup seedless raisins 2/3 cup chopped pitted dates **Snow Frosting** Maraschino cherries

Cream together shortening and sugar. Add eggs; beat well. Sift dryingredients together, Add alternately with applesauce to creamed mixture. Add raisins and dates. Bake in 9" greased tube pan in 350°F. oven, 1 hour. Let stand until cold. Remove cake from pan. Spread frosting on top and side of cake: Decorate with cherries and citron.

SNOW FROSTING: Cream 2 tablespoons butter. Sift 21/2 cups confectioner's sugar; gradually add, creaming constantly. Add about 3 tablespoons milk to make mixture right consistency for spreading. Add a few grains of salt and 3/4 teaspoon vanilla extract:



4 OUT OF 5 PRIZE WINNERS USE Robin Hood Flour



Can't you almost sniff the warm fragrance of fresh-baked scones, when you look at the picture above? Piping hot, buttered, and heaped with marmalade? M-m-m! It's another Robin Hood Prize Winning Recipe . . . just as easy as pie to make right when you use the flour that's won so many prizes!

This First Prize Winner Uses Robin Hood for All Baking

Mrs. G. A. Johnson, 863 3rd Ave., E., of Owen Sound has been using Robin Hood Flour for twenty-nine years. Mrs. Johnson is well known for her wonderful baking, not only as Prize Winner at the Owen Sound County Fair home-baking contests, but with the general public as well.

"For three and a half years, as well as looking after my own home, I've been doing the pastry cooking at the Seldon House" stated Mrs. Johnson, a pleasant friendly woman, smart in her crisp white uniform.

"I specialize in hot rolls, buns and tea biscuits. To make them, I prefer Robin Hood Flour. And it's the flour that went into my prize sponge cake, and the pies I showed at the Fair.

"Robin Hood's a grand flour — for breads, cakes, and pastry!"

A HARD-TO-BEAT ROBIN HOOD RECIPE FOR BUTTERMILK SCONES "An old-fashioned recipe brought up to date"

- 2 cups sifted ROBIN HOOD FLOUR
- ½ teaspoon baking soda
- 2 tablespoons sugar

- ½ teaspoon salt
- 4 tablespoons shortening
- 3/4 cup plus 2 tablespoons buttermilk or sour milk.

Preheat to very hot oven (450 degrees F.). Sift together flour, baking soda, sugar and salt into mixing bowl. Cut shortening into small pieces and add to dry ingredients. Blend together until mixture is mealy, using pastry blender (or two knives, cutting in with seissor-like motion). Make a well in centre of the mixture and gradually add the buttermilk or sour milk, stirring lightly with fork. Mix only until soft dough is formed.

Turn onto lightly floured bakeboard or pastry cloth and divide in two equal portions. Gently roll out each piece with floured rolling pin or pat out with hand into circles ½ inch thick. Place circles on ungreased cookie sheet and cut in quarters, but do not separate the pieces. Bake in very hot oven (450 degrees F.) for 12 to 15 minutes.

Yield: 8 individual scones.

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solver plus Seismotite that gives Old Dutch a special, fast cleaning action no other material has!

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MADE IN CANADA



Pancakes

Vary the old-fashioned theme

ANCAKES are hot, pancakes are good, pancakes are versatile. Served for breakfast with butter and maple syrup or brown sugar they are a familiar favorite. In fact they are so popular this way that few people realize the possibilities pancakes offer for pleasant variation.

Buckwheat cakes served with sausages and gravy, corn pancakes with fried ham or bacon, cheese cakes with tomato, plain pancakes with creamed chicken, meat or vegetables, are all hearty, appetizing and filling main courses. A thin pancake wrapped around a sausage, and glazed with a thick syrup made of brown sugar is delicious.

Pancakes also make tasty desserts. Spread with mixtures such as jams, jellies, marmalade or fruit pulp they add that sweet touch to the end of the meal.

When a basic recipe is found which suits the family vary it by using different flours. White, buckwheat, whole wheat, or cornmeal flour may be substituted. An egg may or may not be added to enrich the mixture, and either sweet or sour milk may be used.

Have the griddle hot enough so the pancake will brown without burning. Turn when the bubbles have formed on the uncooked side and before these bubbles break. The batter should be thin enough to spread out easily on the griddle.

Mocha Pancakes

1¼ c. flour 1 T. baking powder
½ tsp. salt 1 T. sugar
2 egg yolks 1 c. strong coffee
2 tsp. melted fat

Mix and sift flour, baking powder, salt and sugar. Beat yolks, add coffee and stir into dry ingredients. Add fat and beat well. Cook on a greased griddle.

Corn Pancakes

1½ c. flour 3½ tsp. baking powder 3 T. sugar ¾ tsp. salt 1 c. milk

1 c. canned whole kernel corn 3 T. melted shortening

1 egg

Sift together flour, baking powder, sugar and salt. Beat egg, add milk. Combine with dry ingredients, mixing smooth. Add corn and shortening. Drop by spoonfuls on hot griddle, spreading thin. Bake, turning to brown on both sides. Serve hot. Serves four.

Sour Milk Pancakes

 $2\frac{1}{2}$ c. flour 2 c. sour milk $\frac{1}{2}$ tsp. salt 1½ tsp. soda 1 egg, well beaten

Mix and sift flour, salt and soda; add sour milk and egg. For a richer batter add two tablespoons shortening and one tablespoon sugar. Cook on a hot griddle. Makes 18 pancakes.

Jelly Pancakes

3 eggs. separated ½ c. sifted flour
1 tsp. sugar 1 T. melted shortening
1 c. milk Tart fruit jelly

Beat egg yolks and add salt, sugar, and half cup milk. Add flour and shortening and mix until smooth, then add remaining milk. Fold in stiffly beaten egg whites. Bake on a hot griddle, making cakes larger than usual and very thin. Spread with jelly and roll up while hot. Serve with overlapping edges of cakes on bottom to keep them from unrolling. Sprinkle with confectioner's sugar if desired. Makes 12.

Bread Crumb Pancakes

1 c. bread crumbs
1 c. milk
2 tsp. baking powder
1 egg
A little flour

Roll stale bread into coarse crumbs. Soak crumbs overnight in milk. In the morning add salt, well beaten egg and enough flour sifted together with baking powder to make a soft batter. Beat well. Cook on hot griddle.



Farm Women Convene

Annual meeting of U.F.W.A. deals with many matters of interest to rural people --- By Marjorie Stiles

HE thirtieth annual convention of the United Farm Women of Alberta was held recently in Calgary. In her annual address Mrs. M. E. Lowe, president of the U.F.W.A., reported an increase in membership, which now numbers 1,965, in 111 locals. There were about 150 delegates, and another 100 visitors at the convention.

"Health and education top the list of studies and will continue to do so until a greater measure of opportunity in these is provided in our rural communities. In the study of Health Insurance, we discovered that 41,000 Canadians died during the war, while 130,000 babies lost their lives in the same period. The war has ended—but the loss of Canadian babies continues."

This high infant mortality rate, Mrs. lowe declared was due to the higher teath rate among rural babies. Medical services are unevenly distributed; ne-third of our population live in ities of 30,000 or over, and 55 per cent of our doctors practise there. For this reason, she said, the U.F.W.A. should back to the limit, principles set out by the Canadian Federation of Agricultre, whereby a health insurance plan nust include everyone and should be inanced out of Dominion consolidated evenue.

Having modernized the machinery of ocal administration of education, Alerta has done nothing to reduce the ocal property taxes as has been done n some provinces, Mrs. Lowe said. A request was made for the provincial overnment to assume 50 per cent of cost of education.

Mrs. Lowe expressed disappointment hat in the recent competition in deigns for small homes, sponsored by central Mortgage and Housing Corporation, Alberta architects (who unterstand the problems of western contruction) failed to include plans for arm houses. The judges reported no ew techniques or use of new building naterials.

Resolutions adopted by the convention included one requesting that rural lectrification be extended as soon as possible. Another that the U.F.W.A. equest the Alberta Government to set p a Rural Housing Committee to furnish plans for building and remodelling arm homes. And one asking that Central Mortgage and Housing Corporation evote a fair share of money voted to by the Canadian Government for research in housing to carry on actual esearch and provide plans for building and remodelling farm homes.

In her report on Rural Housing, Mrs. Torrie voiced disappointment that thing on a provincial scale was being done to improve living conditions in arm homes. The district home economists have conducted demonstrations in the use of electric appliances in ocalities served by rural electricity. It can are said to be under way to oranize study groups in rural areas for ome improvement.

teacher shortage roughout North America, Dr. Swift, eputy Minister of Education, said hen addressing the convention. We just increase salaries and make workng conditions more attractive to retain ood teachers in the profession. He felt e must assist in the transition from igh school student to worker, pointing at that one day a boy is a student—the ext week a truck driver, expected to sume adult responsibilities. Only in ch professions as medicine and nursg was the training period long enough make this change without difficulty. e School of Agriculture was also bing excellent work in this respect.

Dr. Swift said another serious problem was how to maintain efficiency in the skill subjects such as reading, spelling and arithmetic, when modern society demands so many extra subjects, as music, contemporary social studies, typing, etc., which were all good subjects, but encroached upon the time formerly used for drill. To offset this, Dr. Swift maintained we must evolve better teaching techniques and provide better materials, especially work books for reading.

Mrs. R. Stetson, Edmonton, described the work done in Alberta for children with poor eyesight. Studies are made up in special cards with very large print for use in the home; while two sightsaving classes are held, one in Calgary and one in Edmonton, for afflicted children. Twenty-five blind children are taken from Edmonton in a specially designed railway coach under escort to school in Brantford each September and returned to their parents in June. Mrs. Stetson urged parents with afflicted children to get in touch with the Canadian Institute for the Blind.

The Department of Education was commended in undertaking a province-wide test of grade six students, so that efficiency of teaching methods and pupils' proficiency will be available for reference. The first attempt to teach science of agriculture in public schools is under way at Cardston, with a special instructor in Animal Husbandry and Farm Mechanics. "I wish to stress need for larger government grants and the value of audio-visual instruction," concluded Mrs. Stetson.

THE U.F.W.A. program was somewhat curtailed by joint sessions with the U.F.A. to discuss the amalgamation of the three farm organizations in Alberta and future strike action. If a merger should be effected, provision w for a women's organization, als of which could be organized by sk farm women interested in furthering the interests of agriculture; the name of which would be chosen by the U.F.W.A. On the question of strike action, should it arise, a resolution was passed requesting that the matter be discussed with the Canadian Federation of Agriculture; and before a strike could be called 75 per cent of the U.F.A. members would have to vote in favor of such action.

There were 96 resolutions sent in from the locals for discussion—a baker's dozen on education—four requesting the Borstal System of training juvenile delinquents—several on income tax, with emphasis on exemption of a set income for farmers' wives. Grounds for divorce were asked to include five years of insanity; desertion for at least three years; cruelty. The Federal government was asked to assume responsibility for treatment of arthritis and cancer.

It was pointed out that the quality of manufactured goods has deteriorated; to offset this, the U.F.W.A. requested W.P.T.B. Standards Board be retained, and goods be graded according to quality, and so indicated on the label.

"We are demanding our school teachers be better trained, but what training do we prescribe for mothers?" asked Mrs. V. I. Flint, Beaverlodge. She felt a complete physical examination and serological test for syphilis before marriage, and for expectant mothers, would save thousands of dollars and result in a greatly improved health of the nation.

To offset the rising tide of divorces, pre-marital guidance was asked for, "Resolve: (1) That literature covering the emotional, homemaking and legal







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aspects of marriage be provided with the marriage license; (2) that literature and guidance covering the physical aspects of marriage be provided by the doctor taking the blood-test required by law in Alberta." By special request of delegates, copies of this resolution are being sent to Ministerial Associations, Medical and Nursing Associations, and the Women's Service Board of the Department of Agricul-

Speaking on this motion, Mrs. Stiles said pre-marital clinics had been held with success in Saskatoon, Vancouver, and Montreal, but would not help the rural population. If printed literature were provided on application for the marriage license (which is the first legal step towards marriage), it could serve as a basis for an interview between the young couple and the officiating minister and doctor.

Rev. Frank Morley said he heartily endorsed this resolution; that he insisted on an interview before marriage in which he pointed out the problems and responsibilities of marriage. He said during the last two years, he has had as many as three couples come to him in one day for assistance and guidance through marital difficulties. Differences were caused by sex, money and

in-laws. Dr. Morley found that if he could steady the young couple through the period of re-adjustment, the marriage usually turned out successfully.

To a request that the sensational type of children's radio program be abolished Mrs. Anne Peters said this was one field where the individual could do a great deal by writing a personal letter to the radio station, commending suitable programs and criticizing sensational ones.

"Let us do our part in re-establishing Europe's displaced persons," declared Mrs. R. Johnson, convener of immigration, "But let our immigrants be chosen for their skills, physical fitness, and ability to fit into our way of life." A resolution was passed requiring an extensive medical examination for all immigrants.

Pay for nurses in training, to attract more to the profession was requested by Carstairs Junior U.F.A.

"Let us crusade for scientific examination and treatment for sex perverts," demanded Mrs. Harold Riley. She pointed out that sometimes the fine is only five dollars, and that offenders are very often repeaters of this offense. Suspension of drivers' licenses of those convicted of drunken driving was also

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Ex-Lax is one laxative that avoids extremes. It works easily and effectively at the same time. In other words, Ex-Lax is

- the Happy Medium!

EX-LAX The Chocolated Laxative Only 15c. or 35c.

BE SAFE AT HOME

Continued from page 85

MEDICINE should be kept out of the reach of children, and poisons should be well labelled and locked up if possible. Never take medicines in a poor light, as there is always the danger of not taking the right bottle off the shelf. Old razor blades should be carefully wrapped up and thrown into a special container. Keep a first-aid kit handy in the bathroom, and instruct every responsible person in the household as to its use.

Stairways are the scene of many accidents. Worn or torn treads and boards should be replaced immediately, and never left to do tomorrow. If carpeting is used be sure it is firmly and securely tacked in place. Never have loose rugs at the top or bottom of stairs. Adequate handrails of a good sound construction are also a must for the safe stairway. Children and older people especially need these. A good height is 42 inches measuring from the edge of the tread to the top of the handrail. All overhead obstructions should be removed to prevent bumped heads. Painting the stair treads a light color will help visibility. Stairways should always be lit as adequately as it is possible to help prevent accidents.

Litter such as brooms, cans, toys, waste baskets, laundry hampers, etc., seem to find their way to the stairs. It is a dangerous practice and one that encourages falls. Keep all the stairs in the house free of objects, and teach children to store their toys in a safe place. Never attempt to go up or down stairs with such large loads that you cannot see properly. Make two trips, or get the help of another person. Avoid carrying hot liquids or sharp objects up the stairs. If there are small children in the house, install gates at the top and bottom of the stairs.

Basements should be kept as free as possible from litter and accumulation of articles. Racks may be built for storing windows, screens, tools, and other equipment to keep it safely out of the way. Whitewashing or lightening the walls in dark corners and stumbling places will help cut down this hazard.

With the coming of rural electrification it is wise to acquaint yourselves with the dangers which the careless handling of electricity will present. Touching electrical fixtures with wet hands or cloth may cause a fatal shock. When installing wires in the home have the job done by an expert. He will see that they are properly insulated. Worn wires for irons and toasters and other household equipment are a hazard and should be repaired.

When looking around your home for possible danger spots or unsafe practices others may come to your attention. For the family's sake these should be corrected as soon as possible. Safety in the home comes only if a continuous lookout is kept for hazards and pitfalls which may lead to accidents.

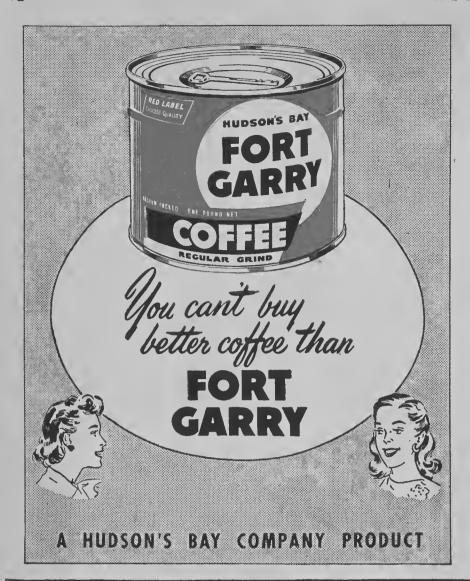
A booklet titled "At Home, At Work, At Play, Prevent Accidents" has been published by the Robin Hood Flour Mills. It contains a wealth of information about safe practices in everyday life. Throughout the 47 well-illustrated pages, safety measures are stressed for all parts of the home, the back yard, porches and garages. Hazards occurring at work in the barn and barnyard, in using farm equipment, in the handling of animals, fire, electricity and tools are presented. Playing safely is emphasized, pointing out hazards in hunting, fishing, care of children, and traffic in the city and country. The free booklet is available from the Robin Hood Flour Mills in most of the leading cities.



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CJGX Yorkton



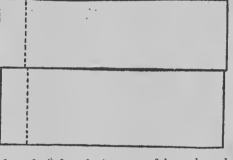
IN ENGLAND NOW Continued from 84

thing. But you have your real friends in just as often and they eat what you have and enjoy it with you. And if they have to clear away afterwards and help with the washing up, they take it as a matter of course. You will do the same for them when you go to their house because nobody has any maids. Occasionally we manage a party for the children although it does use up the butter and sugar. Nobody grudges the children their fun and after all they never wanted a war. Another way that is becoming increasingly popular is for two or three young mothers to get together and give a joint children's party.

Rationing has put an end to insincere hospitality but of the really true kind there is no slackening; it is very satisfactory to know that if you are asked anywhere now you truly are wanted. In that way if in no other, rationing has done us a good turn.

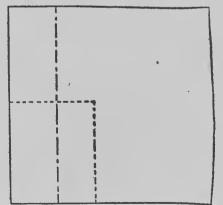
Pointers on House Planning

WHEN planning a house don't cramp yourself for room space. The extra space doesn't cost much if no new rooms are added. For example you may be planning a bungalow 24x28 but the rooms may seem rather small. Adding another four feet to the length and making it 24x32 would require addition material for 96 square feet of floor space, 26 yards more of inside walls and ceiling, about 80 square feet more of outside wall and 128 square feet more



of roof. A few feet more of base board would be necessary. But the house will have the same number of doors and windows, the same cross partitions, the same end walls, the installations will be the same, and the labor cost will not be greatly increased. Over 800 cubic feet of space is added to the bungalow and the extra length may mean that the rooms, or some of them, are very much more convenient in size.

Another point worth remembering is that for economy of construction and heating, the square or rectangular design is superior to an L or T. The idea is illustrated in the drawing. Note that the same amount of outside wall is required to enclose the full square as the L design. The loss of heat through these



walls will be the same for the larger as for the smaller space. There will, of course, be a greater use of floor, ceiling and roof to construct, but on the other hand construction is simplified. The space is enclosed above the dot-anddash line is the same as the space in the L. L's and T's call for valleys in the roof, which add to the cost of construction. Modern utility houses are mostly rectangular in outline and are quite attractive in appearance.—R.D.C.



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Time For Beauty Care

Preventive and corrective suggestions to overcome effects of rough and cold weather—By Loretta Miller



Jeanne Crain, star of 20th Century-Fox Films analyzes the results of her complexion care.

ARCH hangs over our heads and its cold, blustering weather nips at cheeks and fingertips. Soap and water cleansings ake the already dry skin more parched han ever, and powder stands out on ne face like a mask. Even usually wellehaved hair reacts to the season, and ither hangs limp and straight as the roverbial poker, or becomes brittle nd tangles easily. Fingernails snap off r split. Lips crack and rouge cakes on nem. Shins get red, rough and sensive, and hands seem awkward when ney're chapped red. Altogether it's not ne season when good looks come asily. One must know how to prevent pauty-mishaps or be prepared to overme them.

One finds there are almost as many medies as there are skins. One comlexion takes kindly to an application almost any greasy beauty cream apied after exposure, while another's emplexion must be protected with a in film of the vanishing cream type preparation before exposure. Or, peraps application upon application of othing lotion used after soap and ater washings will be the way to keep in lovely. Certain hand lotions conin special soothing agents that seem pecially to be effective on the facial in, and may be used before make-up. many as three applications may be ed at one time, massaging over each til all stickiness disappears from the face. When even a light dusting on powder looks like a mask, it's well remove all powder at once. Then nooth over the skin a thin film of tion before putting on the make-up. his invisible foundation serves to hold ake-up and makes it blend with the

Colorless lip pomade, or those ever lightly tinted, should be used on all is before going out in severe weather wind. This soothing lip "dressing" ay be used as the only lip make-up, it may serve as foundation for more lorful rouge. Sports enthusiasts, both and women, find a good lip pomade essential part of their sports equipent. Children, too, whose lips are sily irritated and cracked by the cold, if find soothing relief in the preposure use of pomade.

f your nails are at various lengths that no two fingertips match, blame weather. Extreme cold makes the is dry and brittle, causing them

either to split at the sides or snap off completely. Beginning early in the season to prepare the nails for the cold, is one solution to the problem. Repeated applications of brittle nail cream or oil, or pure lanolin, massaged over the nails every day or two, will serve as a splendid preventive against breakage. Once the breaking and splitting have started, double up on the use of oil or cream, massaging it over the nails, and around them, every morning and night.

Tender scalp and straight, stringy hair often come with cold weather. Though hair may be difficult to manage, a scalp condition often causes real discomfort, especially when one attempts to change the part or rearrange

the hair. If you try a new hairdo during the winter, and your scalp rebels, better wait until warmer weather.

Repeated brushings every night, followed by a light scalp massage, and perhaps a very, very light application of pomade or brilliantine, will do wonders with the hair. Pampering by brushing serves as exercise to the hair, while the brilliantine tends to off-set the dryness, and both work to do away with limp, unruly hair, as well as hair that tangles easily.

Heavy winter clothes that swish and rub against shins often contribute to chapness and soreness that makes even the touch of stockings unwelcome. Camphor ice rubbed over the soreness each night before going to bed, will work to do away with sensitive skin and go far toward warding off the next day's irritation. Soothing hand or skin lotion, or your favorite skin balm may be used in place of the suggested camphor ice. Let me repeat, there are almost as many remedies for preventing and correcting weather-beaten skin, as there are skins. So if one suggestion doesn't work, by all means try another. It is impossible to give a "cureall" for every type of skin and every condition. The trial and error method will acquaint you with the right procedure for your needs.

Elbows that get rough and upper arms that chap, as well as hands that are red, rough and sore, should be given as much soothing lotion as the skin will drink in. It is only by making frequent applications, and working each well into and over the skin, that weather-touched skin will be made smooth.

When cold causes your nose to redden, and if you are to be out of doors for any length of time, you might like to know about the various types of foundation that do a thorough job of covering the skin. These foundations are usually applied with a sponge, pad of cotton or a brush, and come in tones to match the natural complexion. A light dusting of powder used on the foundation will prevent "red-nose" during your outdoor exposure.

You'll find such protective and corrective methods as those outlined today will serve a double purpose. While warding off or correcting winter damage to the skin, the lubricants used on hands, nails, hair and face will also do much to make next summer's beauty routine



BORDERINE ANEMA

can steal away a woman's beauty!

BEAUTY fades when a woman's face grows pale—when her freshness is failing—her energy runs low. Yes, and these signs often come from a blood condition. If you have them, you may have a Borderline Anemia, a mild anemia due to a nutritional deficiency of iron.

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So, if your color is poor—your energy low and this common blood condition's to blame—take Ironized Yeast Tablets. They are formulated to help build up faded red blood cells, and thus restore vigor. Of course, continuing tiredness and pallor may be due to other conditions—so consult your doctor regularly. But in this

Borderline Anemia, take Ironized Yeast Tablets to start your energy shifting back into "high"—to help restore your natural color! Take them so you can enjoy life again!

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Styles for March



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No. 2166—An attractive and new three-piece bolero outfit. Cut in sizes 10, 12, 14, 16, 18, and 20 years. Size 16 bolero and skirt require 21/4 yards 54-inch fabric; blouse requires 1¾ yards 39-inch fabric.

No. 2160-A youthful dress with clean-cut lines. Cut in sizes 11, 13, 15, 17, and 19 years. Size 15 requires 31/2 yards 39-inch fabric or 21/4 yards 54-inch fabric.

No. 2927-A fresh looking wrap-around housedress. Cut in sizes 12, 14, 16, 18, and 20 years, 36, 38, 40, 42, 46, and 48 inches bust. Size 36 requires 4 yards 35-inch fabric, 31/8 yards braid.

No. 2683-A dainty nightgown that has perfect fit. Cut in sizes 10, 12, 14, 16, 18, and 20 years, 36, 38 and 40 inches bust. Size 16 requires 2% yards 39-inch fabric with $\frac{1}{2}$ yard all-over lace and $\frac{3}{4}$ yard ruffling or lace.

No. 2722—Good fit and lovely appearance are combined in this slip and pantie set. Cut in sizes 12, 14, 16, 18, and 20 years, 36, 38, 40, 42, and 44 inches bust. Size 36 requires 21/8 yards 39-inch fabric for both.

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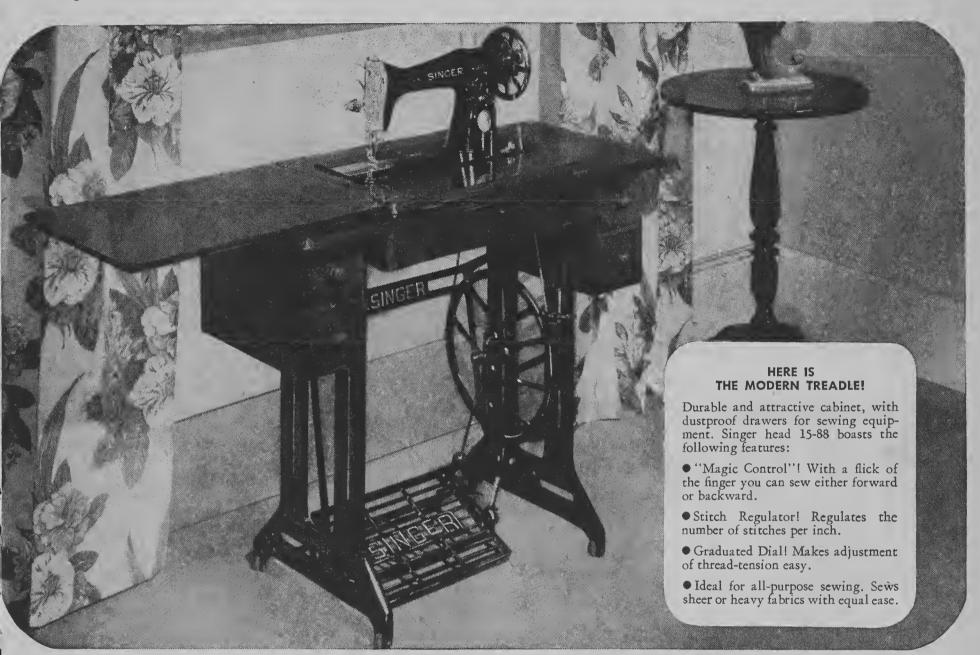
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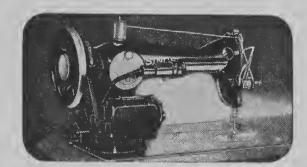
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SO YOU WANT TO GO TO THE COAST?

Continued from page 5

and it is usually only the top prices you hear quoted—are for the very finest quality of the best variety of apples. These are the MacIntosh, Delicious, Newton, and Winesap; but they aren't the only varieties grown. In fact, there are about 200 others, and many of them bring in less than half the returns that the best kinds do, though they cost just as much to produce.

I've seen a 1939 price statement of \$1.00 for 22 boxes of off-variety apples. If you pay a high price for an orchard of these "off varieties" or even an orchard with poor trees of the better varieties, expecting to reach top prices—well, you'll be disappointed to say the least.

Don't be too willing to believe careless talk of crops of "a thousand boxes of apples to the acre" either. Some orchards do give such crops—but most produce in alternate years—heavy one year, light the next. The average throughout the Okanagan is about 300 packed boxes per acre over a period of years. Of course, those are packed boxes; when you pick the fruit in the orchard, putting it loose in apple boxes and filling them about three-quarters full, you'll get more; but it takes about 10 of these "loose boxes" to make seven packs.

As standard apple-tree planting is about 60 trees to the acre, 300 packs per acre works out to an average of seven loose boxes per tree. Orchardists will proudly show you single trees that produce 40 and 50 boxes in one year; but you don't see an acre of them. The average is still seven boxes.

WHAT about other fruits than apples? Pears are a little higher in price, perhaps a little cheaper to grow, don't yield quite as heavily, probably. "Soft fruits"—cherries, peaches, and apricots -yield heavily and steadily and have no expensive spraying; some growers maintain that they bring in double what apples do. Four tons of cherries to the acre at 16 cents a pound with perhaps five cents a pound off for expenses, or five tons of peaches at \$105 a ton, with perhaps \$150 expenses per acre, compare well with 300 boxes of apples at \$1.50 per box, and expenses of 70 cents per box. All estimates of cost of production are merely vague approximations; ask any farmer . . . !

But the soft fruits are touchy fruits; a late frost can ruin a crop—indeed, they can only be grown in the south half of the valley; a rain when they are ripe will split and spoil cherries, and a hailstorm may do the same for peaches and apricots. They are perishable stuff to market, too; whereas apples can be kept in cold storage for months or shipped all over the world;

a ripe apricot or peach won't hold u long. The market for them appears t be pretty well limited to Canada; an come any kind of financial slump, t that people couldn't afford to pay bi prices for fruit or buy so much of itwell . . .

Incidentally, even if you are the type of gambler who likes to risk all h eggs in one basket, it's not easy to g an orchard that is all one kind of frui All apples, yes, but usually of sever varieties; and other fruits, pears, apr cots, peaches, cherries, are usually four mixed in with apple and each other i a sort of fruit salad a la tree. Aft you've picked peaches a few days an found how itchy the peach fuzz ca be in the creases of arms and nec you'll be glad if you don't get a who orchard of them, and echo fervent the old Okanagan's prayer-"Lord, sen us a peach that has no fuzz and apple that needs no spray!"

And there it is. I've tried to give you both ideas of the situation here. Mar fruit growers in B.C. seem to haplenty of money and excellent car many still drive cut-down monstrosties of 1929 and 1930 vintage. The have better homes, on the average than the prairie farmer. On the oth hand, when I first came to live in the Okanagan in 1937, it was amazing here fruit farmers made a living fruit-growing alone; most of the worked out for others, or in packin houses, or had another income son how.

Maybe your best bet, if you're thin ing of moving out and buying an ochard, would be to come out and sthe country and work in orchards fafew months or a year. You might fit odd to be a farm hand on a standa sor 9-hour day, paid by the hoboarding yourself and carrying yo lunch bucket; but it's an interestite experience, and bearable at 60 to cents an hour. (I did it for 30 cents 1939.)

Then you'll be able to see wheth you like ladder work, or miss your par chute too much on the top stawhether the mild, less windy winter sufficient compensation for summelong dry searing; and whether you room enough there. Many prairie for feel cramped on the little farms surrounded by trees; others are oppressible to the mountains. They aren't his 3,000 to 5,000 feet, but they are closesome find them too close.

Speaking of altitudes, Okanagan Laitself is only 1,100 feet above sea levand much of the orchard land lateween that and 1,400 feet, so it really lower than much of the prairi What else can I tell you? Few flies a mosquitoes, an occasional rattlesnaback in the hills, fair fishing, fair hutting for deer and pheasants, sumn nights are cool enough for sleeping most parts.

Come and see for yourself if the anything I've forgotten—but as Scots would say, come canny, laddcome gey canny.



A power spraying outfit on an Okanagan fruit farm.

The Country Boy and Girl

Willie In The Wind

By MARY E. GRANNAN

ILLIE was watching a little chickadee. He would fly from the hawrn bush, to the old stone fence back the barn, then to the bare brown elm that stood by the roadside. Then would spread his wings again and r high up into the sky, cut a few ers and come back to the hawthorn. Villie sighed. The chickadee heard "What's the matter, Willie?" he rped.

Oh," sighed Willie again. "I wish I wings, that's all."

Why?" asked the chickadee.

Cause," said Willie. "I'd like to fly ough the air like you do. You have h fun up there, and I have to stay n here on the ground."

he chickadee cocked an interested d. "You don't have to have wings, lie, to fly through the air," he said. Villie now cocked an interested head. it how else can you do it?"

Get the wind to help you. She's t obliging and she's very strong in month of March. If you want me to, go up there and tell her to come n and get you."

Villie was a bit afraid of what the d might do, so he said to the bird. t she might just toss me any old re. I don't want to go any old

he will take you any place you t to go," said the chickadee. "I w she will."

Well," said Willie, "send her down I'll ask her."

the chickadee went back into the found Old Mother Wind, who was obliging and who came right down here Willie stood in the barnyard. Iello, Willie," she said. "The chickatells me you want to ride in the

s," said Willie, "I do—I do. Will take me up there, Mother Wind?" es," said Mother Wind. "Where do want to go, Willie?"

want to go as high as the stars, use . . ." and Willie laughed. "I've ys wanted to see what's inside of Big Dipper. Will you take me up so I can find out?"

es," said the Wind. "I'll do that you. Move out into the open, so I get a good sweep at you."

llie moved into the centre of the yard. The wind swooped down, Willie from his feet and carried away. But just as he was passing corner of the barn, a jutting nail ht Willie's belt, and he was stopped. other Wind! Mother Wind! Come

Come back! I'm caught on a cried Willie.

e wind came back. She looked at c. He was hanging there as solid he bare brown elm stood on the side. She played around him—sent little breezes and big gales; but ould not loose Willie. The chickawas very excited and chirped so y that Willie's father who was ing inside the barn came out to hat was the matter.

ood gracious!" he cried. "What on are you doing up there, Willie. did you get up there anyway?"

he wind carried me," cried Willie. was taking me to see inside of the er. Please get me off here, Dad, so's

d went into the barn and got a r. When he got Willie down, he him to go into the house and stay

Nothing Willie could say could his father change his mind. The ay when Willie saw the chickahat little fellow said that Mother would have nothing more to do

LET the March winds blow! Already your thoughts are turning to Easter time and spring, for this year Easter Sunday comes early, on April 6. Even at this time of year the signs of spring are in the air. Your mother and father perhaps have discussed the arrangements for the setting of the hens and seeding the grain. The whole family has looked over the seed catalog and each one has pictured for himself the beautiful blooms that are going to spring up in the garden this summer. You listen to all this planning with interest for you have a share in the family plans as well as your very own plans for Easter time.

A surprise Easter gift for Mother—yes to be sure! What will it be? Try making a book mark from a piece of colored ribbon about six inches long. Cut three or four brightly colored flower heads from old magazines or greeting cards and paste them even spaces apart on the ribbon.

Here is also an Easter card for you to make to accompany your gift or to give to some friend. Trace the rabbit, Easter lily and flower pot on small pieces of paper, then cut them out and paste them on a sheet of paper 4 by 5 inches, as shown in the sketch, and color them. Now mount your card on a larger colored sheet of paper. The Easter colors are:

green, mauve, yellow and white; use them for your bookmark and Easter

Unn Sankey



with Willie and his trip to the stars. Mother Wind said that Willie's father knew best. So Willie has never seen what is inside the Big Dipper. And he blames it all on a nail.

What Do You Want To Be? Have you thought of becoming a Librarian?

FOR those of you who enjoy reading here is an opportunity to earn a living by reading extensively. What a joy for all you bookworms! Ask yourself this question—do I like books and people? If so here is an excellent career for you.

Public libraries are becoming bright, attractive places which are of interest to adults and a joy to the young people. Often libraries arrange educational films for the public as well as programs with guest speakers. Most large libraries have special rooms for young folks to read the books they are interested in. Attractive displays of books around the room are made to encourage people to explore them. So you see the librarian's work has variety.

The librarian's main work is to know the answer to any question she is asked or to know where to find the answer. It is of great value, you see, to have an inquisitive mind. Just think of the many questions a librarian must be asked in a single year! What a store of knowledge she builds up for herself while helping other people to find the information they seek!

Public libraries are not the only places where you will find employment. Museums have libraries, research laboratories have scientific libraries, newspapers, advertising agencies, telephone companies, broadcasting companies and motion picture companies all keep an up-to-date library where a qualified librarian is employed.

What training do you require? Complete your high school matriculation course choosing the courses which interest you the most whether it be mathematics, science or English. Now you enter university and take a fouryear course in general arts. Then you must spend one year at a library school. Not every university offers a course in library work so you may have to go to another province to complete a librarian's course.

Your hours of work will not be regular if you become librarian in a public library for the libraries are open in the evenings to allow workers to get books after their working hours. However, you work an eight-hour day with a morning or an evening free.

If you have a "detective mind" you will enjoy tracking down all kinds of information. If you love to explore old books and rare manuscripts and above all if you are a real book lover the career for you is library work. Write to the registrar of several universities in Canada and receive more information on librarian's courses.-A.T.

How Successful Will You Be? By WALTER KING.

THIS test will help you discover your chances of success in life. It is based on the "laws of success" formulated by Napoleon Hill, author of "Think and Grow Rich." Whether you score high or not, it will help you see just where you are falling down. The correction of some of your weak points now may prove to be the turning point of your career.

Check off the questions to which you can truthfully answer "yes." The method of scoring is explained later.

1. Have you decided what you are going to be?

2. Are you doing all you can to prepare yourself for your life's work?

3. Do you feel you are usually a success at whatever you try?

4. Are you a good mixer at a party? 5. Do you save money systematically?

6. Do you keep a diary, collect stamps, or follow a hobby persistently?

7. Do you take hold and do things without waiting to be told?

8. Have you ever held any responsible position in your school or club?

9. Are you good at thinking up new

10. When blocked in your efforts in one direction do you keep on trying other ways until you win out?

11. Do you tackle what has to be done speedily and with vim?

12. Do you usually try to do a little more than is necessary just for good

13. Have you good control over your

14. Have you good control over your

15. Do you make and keep friends

16. Do you try to be mannerly?

17. Are you a hard worker at home and school?

18. Do you try to think things out carefully before acting?

19. Can you settle down to one task until you have completed a worthwhile piece of work?

20. Do you like studying?

21. Do you get along well with other people?

22. Do you respect the other person's

23. Do you try to avoid making the same mistakes twice? 24. Does a failure help to spur you on

to greater efforts? 25. Do you look for the best in other

26. Do you practise the Golden Rule?

27. Do you enjoy good health? 28. Do you take care of yourself; eat

and sleep regularly, wash and bath often, keep your teeth clean, and dress neatly?

29. Do you make better than average marks at school?

30. Are you of a cheerful disposition, not easily discouraged?

Now for your score. The following chart refers to the number of "yes" answers:

27 to 30. Tops. (if you deserved it).

24 to 27. Looks good.

20 to 23. Better than average. 16 to 19. You will get by nicely.

12 to 15. Weak.

Below 12. Too bad.

Ad. Index

Apart from giving Guide readers a ready reference to Items advertised in this issue, the coupon below may be used to order literature, samples, etc., offered our readers, by our advertisers. Advertisers offering literature, samples, etc., are numbered at the ieft and these numbers should be used in the coupon. Where stamps, libels, etc., are required an "X' appears alongside the number." The ad. Itself will tell you what to send.

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THE COUNTRY GUIDE, March, 1947
Winnipeg, Man.
From the Items numbered I have selected the following in which I am interested in the literature, etc., offered.

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Please print plainly.

Between Ourselves



OUR esteemed contemporary Maclean's carries an article by Hugh McLennan in its March 1 issue in which it is alleged that Canadians are behind the times. A. E. White, Coronach, Sask., takes exception to the charge and sends the picture above, which he obtained 30 years ago, to show how far ahead of the times we really are. Mr. White could have added, for the benefit of supporters of the old order, that this happened in the era of private enterprise, before Saskatchewan was captured by those dreadful Socialists who, we understand from The Financial Post, are driving decent people out of the province. But he is vague about the output of this canning enterprise and The Guide must publish the picture without further details.

WHILE I fully agree with your editorial that labor disputes should be settled at the conference table, I'd like to point out to you that a loss of 4,521,620 days is not such a stupendous loss as you seem to indicate. If it is spread over the whole working population of Canada, it must come to much less than the comparative total for the United States, which has been computed as equal to only two national holidays. - J. R. Nystrom, Kandahar, Saskatchewan.

AM sorry to see a growing tendency in The Guide to use more of those small drawings which are supposed to be funny. I do not object to good jokes, well illustrated, but the ones you use are drawn like the horrible comics which seem to be the staple of American newspapers. In the first place most of them are not funny. In the second place they set a very poor standard of art work. For instance the cartoon by Wishart on page 46 of your February issue was one of the worst I have seen in a long time. Your art editor suffers from strabismus.-Al Cheesman, Red

DOES anyone ever write to tell you how much they like The Country Guide? I have a habit of telling people it is my favorite magazine. I like the colored covers so much that I have used them over other pictures in some of my frames. Where do you get them from?-Mrs. M. E. Graham, Parkhill,

BETWEEN ourselves, getting covers, or for that matter any art work, is one of the biggest headaches in publishing magazines in Canada. There are many budding artists in Winnipeg, and elsewhere in the West, but as soon as they reach a fair degree of proficiency they go to Toronto or preferably to New York where opportunities are greater. Most of The Guide covers are bought in

New York, some of them from Canadians who have gone there. Occasionally your art editor, who Mr. Cheesman regards as cock-eyed, sketches the draft of a cover picture and sends it to England. English artists are in a class by themselves for certain kinds of water color work. The Santa Claus head on the Christmas cover came from England. Occasionally The Guide uses colored photographs such as the one on this month's cover, taken by Nick Morant at Banff. The photographs give us deep, rich colors, but as a rule they do not tell the stories that can be told with an artist's brush. This editor has one test for a cover. Does it tell a story? For that reason it is hard to persuade him to use a picture of a vase of flowers, a bowl of fruit, a bathing beauty, or a dead fish flanked by a dead rabbit and a couple of dead prairie chickens. We often wonder if our subscribers think we push this idea of a story cover too far?

HAVING been canvassed recently by a representative of the Progressive Educational Corporation, whose books I don't want, I am quite prepared to believe the stories about the Progressive Evangelical Society, whose creed I don't support and the Progressive Small Loans Guild whose precepts I suspect are the same as they were before they took the three golden balls down from in front of the shop. I think the use of the word "Progressive" has now gone to ridiculous lengths, and I invite The Country Guide to start a crusade against it. We all know what a Conservative is, a Liberal, and a member of the Labor party, and most of us will allow a degree of sincerity to people who openly avow those political faiths. We all put our tongues in our cheeks when we first began to hear of Liberal-Progressives. The term Labor-Progressive is an open and avowed fraud. And John Bracken's adoption of the term Progressive-Conservative was just a clumsy attempt to prove that the spots had been washed off the leopard. This fatuous business has been carried to such lengths that intelligent people now regard the use of the word "Progressive" in a title as a mask behind which some deception is screened. Will The Guide lead the way back to honest labels?-Geo. Wiebe, Regina, Sask.

BOY and dog. Good combination for a story. There's a world of affection and understanding between a boy, wise in the ways of the out-of-doors, and an alert courageous dog. There are many adventurous incidents awaiting a pair like Danny and Big Red in these northern woods and fields. Clarence Tillenius, who knows animals does the illustrations. You'll like it.

What's In This Issue

Under the Peace Tower British Columbia Letter FEATURES So You Want To Go To The Coast?—
By G. E. Valentine

Rust Proof?—By T. Johnson What Future For Wool?-By H. Harnessing the Wind—By T. L. Shepherd Selective Weed Killer—By H. E. Wood ... America Plans Her Farm Future— By Clinton Anderson Plant Exploring In Northern B.C.-By F. L. Skinner The World's Biggest Bonspiel— By Walter II, Randali A Scientific Triumph Getting Ready for Spring-By Harry J. Boyle.. An Australlan Ranch Epic The Blg Blizzard ... Agricultural Advisory Committees . Mr. Strachey Talks Wheat Britain's Agricultural Bill A Century of Limericks FARM News of Agriculture
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Practical Books Bulletins

"A Country Guide Service"

- 22. Hardy Fruits, by G. F. Chipman-25 cents postpaid.
- 23. Farm Workshop Guide, edited
 R. D. Colquette Illustrations a
 instructions for gadgets, and pre
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 paid (or Free with a \$1.00-for
 year subscription).
- 50. The Countrywoman Handboo Book No. 1 Kitchen Labor Save Home Decorating, Pattern Readh Getting Rid of Flies, Bugs, a Beetles, etc., etc.—25c postpaid.
- 52. The Countrywoman Handboo Book No. 3 Nutrition (for necessary for proper quantities vitamins, calories, minerals, etc Canning Meats and Vegetables, Cr ing Meats, Drying Vegetables, St ing Vegetables, etc., etc. 25c.
- 53. Farmer's Handbook on Livesto Book No. 4—Livestock Nutriti Livestock Pests and Diseases, e etc.-25 cents postpaid.
- 54. Farmer's Handbook or Solls Crops, Book No. 5—Types of so Erosion control. Weed control. I age crops, etc., etc., postpaid 2
- 55. Farmer's Handbook on Poult Book No. 6—Poultry Housing; C ing Poultry; Breeding, and C Care; Egg Production; Produ for Meat; Poultry Breeding; P and Diseases; Concerning Turki Raising Geese, etc., postpaid 254

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